

## **B. Resume**

### **1. General**

#### **a. Name**

**Christopher S. Cramer**

#### **b. Educational Background**

**Ph.D., Horticultural Science, Minor in Genetics and Statistics, 1997**

North Carolina State University, Raleigh, NC.

Areas of Specialization: Plant Breeding and Genetics, Quantitative Genetics, Applied Statistics, Vegetable Management

**M.S., Plant Science, 1994**

University of Connecticut, Storrs, CT.

Areas of Specialization: Horticulture, Plant Tissue Culture, Plant Breeding

**B.S., Horticulture with honors and distinction, 1991**

The Pennsylvania State University, University Park, PA

Areas of Specialization: Plant Breeding and Genetics, Floriculture

#### **c. Present Position**

**Assistant Professor** (Sept. 1997-present) Department of Agronomy and Horticulture,

New Mexico State University, Las Cruces, NM.

#### **d. Previous Experience**

**Graduate Research Assistant** (1994-1997) Department of Horticultural Science, North Carolina State University, Raleigh, NC.

**Graduate Research Assistant** (1991-1994) Department of Plant Science, University of Connecticut, Storrs, CT.

## 2. Teaching

### a. *Teaching Responsibility*

#### (1) **General instructional area.**

Horticultural science

#### (2) **Nature of courses taught:**

Courses are taught primarily for horticulture and agronomy majors. Several students from agricultural biology, agricultural extension and education, and molecular biology have enrolled also. Courses range from entry level classes for freshmen and sophomores to upper level classes for graduate students.

Courses taught to date include:

AGRO/HORT 100G - Introductory Plant Science. Developed for undergraduate students. 4 credits hours with a lab.

AGRO/HORT 670 - Biometrical Genetics and Plant Breeding. Developed for graduate students. 3 credit hours.

AGRO 698 - Special Topics. Biotechnology for Plant Breeders. Co-instructor. Developed for graduate students. 3 credits hours.

HORT 200 – Special Topics. Herbaceous Ornamental Plants. Developed for undergraduate students. 3 credit hours with a lab.

HORT 200/450 - Special Topics. Organic Vegetable Production. Developed for undergraduate students. 3 credit hours with a lab.

HORT 450 – Special Topics. Vegetable Crop Management. Developed for undergraduate and graduate students. 4 credit hours with a lab.

HORT 485 – Vegetable Crop Management. Developed for undergraduate and graduate students. 4 credit hours with a lab.

MOLB 590 - Discussions in Molecular Biology. Developed for graduate students. 1 credit hours.

**(3) Special instructional aids and facilities utilized:**

AGRO/HORT 100G (Introductory Plant Science). Students take field trips to research facilities, library, growers' fields, commercial nurseries, and grocery stores. In the laboratory, students gain practical experience in crop production, transplanting, pruning, dissection, identification, plant propagation, and plant breeding. Students write an essay based upon current issues involving plant science and present their essay before the class.

AGRO/HORT 670 (Biometrical Genetics and Plant Breeding). Students used rapid cycling brassica populations to generate several generations, measure quantitative traits, select individuals, and measure response to selection.

HORT 200 (Special Topics. Herbaceous Ornamental Plants). Students take field trips to wholesale and retail nurseries specializing in herbaceous ornamental plants, and to residential landscapes that utilize xeriscaping principles. Students receive practical experience in transplanting, crop culture, plant selection, sexual propagation, and plant identification. Live plant material is provided for study. Students must research two herbaceous ornamental plants not discussed in class, write a description for each plant, and present their plants before the class.

HORT 200/450 (Special Topics. Organic Vegetable Production). Students receive practical experience in growing their own organic vegetable crop. They develop a

management plan for the planting, culture, harvesting, and sale of cool and warm-season vegetable crops. Students provide produce for clients that participate in Community Supported Agriculture (CSA) program.

HORT 485 (Vegetable Crop Management). Students take field trips to local vegetable production operations. Students receive practical experience in growing their own vegetable crop. They develop a management plan for the planting, culture, harvesting, and sale of a cool-season vegetable crop. Students are exposed to numerous vegetable crops through the use of a vegetable demonstration garden. Students organize produce sales to sell vegetables produced in their plots and in the demonstration garden.

**(4) Nature of subject matter:**

AGRO/HORT 100G (Introductory Plant Science) is an introductory course that exposes freshmen and sophomore students in agriculture related majors to the many disciplines of plant science. Students learn plant systematics, plant anatomy, soil science, plant physiology, plant propagation, plant breeding and genetics, landscape design, crop production, crop physiology, and pest management. Students take field trips to research facilities, library, growers' fields, commercial nurseries, and grocery stores. In the laboratory, students gain practical experience in crop production, transplanting, pruning, dissection, identification, plant propagation, and plant breeding. Students write an essay based upon current issues involving plant science and present their essay before the class.

AGRO/HORT 670 (Biometrical Genetics and Plant Breeding) is an upper level graduate course that examines quantitative genetics and how it can be used in a plant

breeding program. Topics covered in the course included single gene inheritance, gene frequency, inbreeding, identity of alleles by descent, covariance of traits, covariance between individuals, epistasis, mating designs, gain from selection, heritability, heterosis and inbreeding depression, genotype by environment interaction, path analysis, and quantitative trait loci.

HORT 200 (Special Topics. Herbaceous Ornamental Plants) is a lower level undergraduate course for horticulture majors and nonmajors. The course reviews the identification, characteristics, and culture of 150-200 herbaceous ornamental plants and their use in the landscape. In addition to plant identification, students learn plant structure, plant classification, sexual and asexual propagation, transplanting, watering, and xeriscaping.

HORT 200/450 (Special Topics. Organic Vegetable Production) is a lower level undergraduate course for nonmajors and an upper level undergraduate course for horticulture majors. Horticulture majors with experience in crop production direct the planning of the next season's vegetable crops. The course gives students practical, experience in vegetable management using organic methods. Students learn cultural practices, cropping systems, crop timing, pest management, harvesting, and distribution.

HORT 485 (Vegetable Crop Management) is an upper level undergraduate course for undergraduate and graduate horticulture majors. Course topics include identification, classification, morphology, growth and development, flowering and fruit set, temperature response, soil pH, mineral nutrition, fertilization, seeds and

seed quality, planting methods, transplants, irrigation practices, mulches, crop rotation, weed management, disease management, and integrated pest management.

***b. Teaching Load***

**(1) Undergraduate courses taught**

Fall 2002	HORT 200/450	Organic Vegetable Production
Fall 2002	AGRO/HORT 100G	Introductory Plant Science
Spring 2002	HORT 200	Herbaceous Ornamental Plants
Spring 2002	HORT 200/450	Organic Vegetable Production
Fall 2001	HORT 485	Vegetable Crop Management
Fall 2001	AGRO/HORT 100G	Introductory Plant Science
Spring 2001	HORT 200	Herbaceous Ornamental Plants
Fall 2000	AGRO/HORT 100	Introductory Plant Science
Fall 1998	HORT 450	Vegetable Crop Management

**(2) Graduate courses taught**

Fall 2000	AGRO 698	Biotechnology for Plant Breeders
Fall 1999	MOLB 590	Discussions in Molecular Biology
Spring 1999	AGRO 670	Biometrical Genetics in Plant Breeding

I was prepared to teach AGRO 670, Biometrical Genetics and Plant Breeding in the Fall semesters of 2000 and 2001. Both times, the course was cancelled due to low enrollment.

**(3) Number of course credits and SCH produced**

**(4) Number of students per course**

Table 1. Schedule of Teaching Activities from 1997 to 2002.

Semester	Course Number	Credits	Student	
			Number	Credit Hours
Fall 2002	HORT 200/450	3	15	45
Fall 2002	AGRO/HORT 100G	4	27	108
Spring 2002	HORT 200	3	4	12
Spring 2002	HORT 200/450	3	8	24
Fall 2001	HORT 485	4	7	28
Fall 2001	AGRO/HORT 100G	4	37	148
Spring 2001	HORT 200	3	5	15
Fall 2000	AGRO/HORT 100	4	30	120
Fall 2000	AGRO 698	3	5	15
Fall 1999	MOLB 590	1	11	11
Spring 1999	AGRO 670	3	5	15
Fall 1998	HORT 450	4	5	20

***c. Teaching Performance***

**(1) Peer evaluation.**

A peer evaluation of my teaching has not been conducted.

**(2) Evaluations from former students.**

An evaluation of my teaching from former students has not been conducted.

### **(3) Student course evaluation.**

Teaching performance has been evaluated through student course evaluations (Table 2).

#### Some (favorite) comments from student course evaluations

##### AGRO/HORT 100G – Introductory Plant Science

“He’s enthusiastic about material he discusses and enjoys answering questions.” “He knows a lot about Horticulture and definitely was teaching something he knows a lot about.” “He likes what he is teaching.” “He loves Horticulture and it shows.” “The material presented in this course is very informative and inclusive of all aspects in the subject.”

##### AGRO/HORT 670 - Biometrical Genetics and Plant Breeding

“Good enthusiasm – he really likes this material.” “His enthusiasm for teaching.”

##### HORT 200 - Special Topics. Herbaceous Ornamental Plants

“His enthusiasm, knowledge base, genuine interest in teaching and building a good professional repor with his students.” “This has been one of the most fun, informative Hort classes I’ve had in a long time.” “He is very knowledgeable about the subject and knows what he’s talking about.” “Dr. Cramer is a good instructor. I enjoy taking his classes.”

##### HORT 200/450 - Special Topics. Organic Vegetable Production

“His personal experience and training in vegetable crops.” “The willingness to learn along with the students.”

### HORT 485 – Vegetable Crop Management

“Dr. Cramer gave each student a chance to work independently as well as a team. I liked that.” “I enjoyed growing my own crop and watching it as it progressed through the season. The class was a lot of fun. Enjoyed everything we did.” “This class has been fun to take. Cramer allows us to try what we have learned in other courses. He provides assistance when we needed it. Great course.” “His enthusiasm about the subject matter kept the course interesting.”

### MOLB 590 - Discussions in Molecular Biology

“Very organized. Having the presentation ready two weeks prior was a good idea. Otherwise, I would have waited until the last minute.” “He made us practice our talks 1-2 weeks before we presented.”

Table 2. Results from Student Course Evaluations.

Course	Semester	Number of respondents			Total
		Superior	Average	Inferior	
<i>How does this course compare with other courses you are taking?</i>					
HORT 200	Spr 2002	2	1	0	3
HORT 200/450	Spr 2002	1	4	0	5
AGRO/HORT 100G	Fall 2001	5	14	7	26
HORT 485	Fall 2001	3	1	2	6
HORT 200	Spr 2001	3	2	0	5
AGRO/HORT 100	Fall 2000	1	12	9	22
MOLB 590	Fall 1999	3	2	0	5
AGRO 670	Spr 1999	4	1	0	5
HORT 450	Fall 1998	3	2	0	5
	Total	25	39	18	82

Excellent    Average    Poor    Total

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*Organization of the course*

HORT 200	Spr 2002	2	2	0	4
HORT 200/450	Spr 2002	0	4	2	6
AGRO/HORT 100G	Fall 2001	9	11	5	25
HORT 485	Fall 2001	3	2	1	6
HORT 200	Spr 2001	3	2	0	5
AGRO/HORT 100	Fall 2000	7	12	2	21
MOLB 590	Fall 1999	5	1	0	6
AGRO 670	Spr 1999	3	2	0	5
HORT 450	Fall 1998	4	1	0	5
	Total	36	37	10	83

Extensive    Average    Limited    Total

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*Familiarity with subject*

HORT 200	Spr 2002	4	0	0	4
HORT 200/450	Spr 2002	2	4	0	6
AGRO/HORT 100G	Fall 2001	25	1	0	26
HORT 485	Fall 2001	4	2	0	6
HORT 200	Spr 2001	5	0	0	5
AGRO/HORT 100	Fall 2000	10	11	1	22
MOLB 590	Fall 1999	3	4	0	7
AGRO 670	Spr 1999	2	3	0	5
HORT 450	Fall 1998	5	0	0	5
	Total	60	25	1	86

Above average   Average   Below average   Total

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*Conveying subject knowledge*

HORT 200	Spr 2002	4	0	0	4
HORT 200/450	Spr 2002	1	5	0	6
AGRO/HORT 100G	Fall 2001	9	8	9	26
HORT 485	Fall 2001	4	2	0	6
HORT 200	Spr 2001	4	1	0	5
AGRO/HORT 100	Fall 2000	3	11	8	22
MOLB 590	Fall 1999	4	3	0	7
AGRO 670	Spr 1999	3	2	0	5
HORT 450	Fall 1998	5	0	0	5
	Total	37	32	17	86

Above average   Average   Below average   Total

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*Ability to stimulate interest*

HORT 200	Spr 2002	3	1	0	4
HORT 200/450	Spr 2002	2	4	0	6
AGRO/HORT 100G	Fall 2001	3	16	7	26
HORT 485	Fall 2001	3	3	0	6
HORT 200	Spr 2001	3	2	0	5
AGRO/HORT 100	Fall 2000	3	5	14	22
MOLB 590	Fall 1999	5	2	0	7
AGRO 670	Spr 1999	3	2	0	5
HORT 450	Fall 1998	2	3	0	5
	Total	27	38	21	86

		Enthusiastic	Average	Boring	Total
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<i>Attitude toward subject</i>					
HORT 200	Spr 2002	4	0	0	4
HORT 200/450	Spr 2002	3	3	0	6
AGRO/HORT 100G	Fall 2001	16	7	3	26
HORT 485	Fall 2001	6	0	0	6
HORT 200	Spr 2001	5	0	0	5
AGRO/HORT 100	Fall 2000	7	14	1	22
MOLB 590	Fall 1999	6	1	0	7
AGRO 670	Spr 1999	4	1	0	5
HORT 450	Fall 1998	5	0	0	5
	Total	56	26	4	86
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**d. Teaching Services**

**(1) Academic advising**

(a) Number of undergraduates.

32

(b) Number of graduates.

10

Major advisor:

1. Troy Larsen (M.S.)

2. Jessica Lopez (M.S.)

3. Jose Palma Escamilla (Ph.D.)

Committee member for:

Matt Garcia (M.S.)

James Ditmore (M.S. – 2002)

Ali Al-Lawati (Ph.D.)

Jose Luis Almanza (Ph.D.)

Hem Singh Banderi (Ph.D.)

Lisa Oelke (Ph.D. - 2001)

Armando Segovia Lerma (Ph.D. - 2000)

(c) Number of international students.

8

(d) Special activities involved with international students.

Provided summer internship for three students from the College of Agriculture,  
National University of Colombia.

(e) Other advising services to students.

Horticulture advisor for undergraduate students.

Co-advisor for undergraduate student club, Horticulture Forum

Regularly participate in new student orientation.

Employed (and mentored) 58 undergraduate students in my research program  
from 1997 to 2002.

Participate in the College's Mentoring Program for new freshman.

Undergraduate advisor for MBRS-RISE program.

Graduate advisor for MBRS-RISE program.

Graduate advisor for MOLB program.

Write letters of recommendation for students.

Help students receive scholarships and find employment.

***e. Professional Service to Teaching***

**(1) Development of instructional resources.**

I have not developed any formal instructional resources related to teaching.

**(2) Assistance to other researchers and courses.**

I have not been asked to guest lecture in other courses.

**(3) Committee memberships related to teaching.**

Member, Horticulture Curriculum Committee

**(4) Recruitment activities.**

Met with numerous high school students and their parents regarding enrollment in horticulture at NMSU.

Participated in departmental recruitment efforts during Spring Visitor's Day, February 21, 2000.

Participated in Produce Judging Contest, New Mexico FFA Convention, Pan American Center, New Mexico State University, Las Cruces, NM, April 6, 2002, April 5, 2001, April 6, 2000, March 25, 1999.

Participated in Crops Judging Contest, New Mexico FFA Convention, Pan American Center, New Mexico State University, Las Cruces, NM, April 7, 2000.

Participated in Floriculture Judging Contest, New Mexico FFA Convention, Pan American Center, New Mexico State University, Las Cruces, NM, April 7, 2000.

Gave presentation about onion breeding to 4-H State Conference for department, July 15, 1999.

Judge for Southwestern New Mexico Science and Engineering Fair, Corbett Center Auditorium, New Mexico State University, Las Cruces, NM, 1998, 1999, 2001.

Represented department at Arts & Sciences Student Fair, Corbett Student Center, NMSU, November 3, 1998.

Recruited potential graduate students for the department at the American Society for Horticultural Science meetings in 1999, 2000, 2001, 2002.

Corresponded with over 40 prospective graduate students since 1997.

Wrote and placed advertisements in the April 1999 issue of ASHS Newsletter, issues of HortOpportunities, and March 1999 issue of Agronomy News for departmental graduate assistantships.

**(5) Self-improvement activities.**

Attended “Teaching Outside of the Box: Honors Faculty Tell All”, Center for Educational Development, New Mexico State University, Conroy Honors Center, September 6, 2002.

Attended “The Team Learning Option” All Day Workshop, Center for Educational Development, New Mexico State University, Las Cruces Hilton, November 30, 2001.

Attended “WebCT in a Day”, NMSU Scholarly Technology & Information Center, New Mexico State University, 50 Milton Hall, April 26, 2001.

Attended “Developing a Philosophy of Teaching”, Center for Educational Development, New Mexico State University, 50 Milton Hall, April 4, 2001.

Attended “Implementing the Seven Principles for Good Practices in Online Education”, Center for Educational Development, New Mexico State University, 50 Milton Hall, March 22, 2001

Attended “Pathfinder: A Way for Organizing Online Materials”, Center for Educational Development, New Mexico State University, 50 Milton Hall, February 27, 2001.

Attended “Successful Teaching of Large Lecture Classes”, Center for Educational Development, New Mexico State University, 174 Milton Hall, February 6, 2001.

Attended “A General Education Faculty Workshop”, Office of the Program Review Committee, New Mexico State University, Corbett Center Senate Chambers, January 4, 2001.

Attended “Test Driving WebCT 3.1”, NMSU Scholarly Technology & Information Center, New Mexico State University, 379 Gerald Thomas Hall, January 4, 2001.

Participated in Writing Across the Curriculum, Dr. Chris Burnham, Coordinator, Department of English, New Mexico State University, May 18-21, 1998.

Attended “Team Teach with a Student Assistant”, Center for Educational Development, New Mexico State University, March 26, 1998.

Attended “Let Them See What You Are Saying Through Imagineering: Visual Communication for Teaching and Learning”, Center for Educational Development, New Mexico State University, March 10, 1998.

Attended “Fun-damental Games of Learning”, Center for Educational Development, New Mexico State University, February 4, 1998.

**(7) Other.**

Participated as a judge for 1999 Graduate Research & Arts Symposium, NMSU Graduate School, Las Cruces, NM, 1999.

Development of HORT 200, AGRO/HORT 100, AGRO/HORT 670, and HORT 485 into WebCT courses.

**3. Research & Other Scholarly Activity****a. *Research Responsibility and Load*****(1) Creative Activity**

Expert on onions. Work closely with growers in the state.

Hired to continue onion breeding program. One of two public onion breeding programs that currently release commercial varieties.

Have developed and released five varieties ('NuMex Camino', 'NuMex Chaco', 'NuMex Crimson', 'NuMex Snowball' 'NuMex Solano') and two germplasm populations (NM 162, NM 172).

Creative activity reflected in selection and recombining breeding lines for the development of new varieties.

Developed webpage for onion breeding program (onion.nmsu.edu).

**(2) List of research areas, titles, and sources of funding**

Principal investigator for the following areas of research:

- 1) Development of improved onion varieties for New Mexico. Funded by the New Mexico Dry Onion Commission (NMDOC). *Long-term project. Five variety releases, two plant variety protection certificates issued, and two germplasm populations released (since 1997).*

- 2) Regeneration of short-day onion accessions. Funded by National Plant Germplasm System (NPGS), USDA. *First year of project.*
- 3) Improving the economic viability of the New Mexico onion industry. Funded by NMDOC. *First year of project.*
- 4) Determining response to selection using several selection methods to improve 'NuMex Solano'. *First year of project.*
- 5) Screening of onion germplasm for Fusarium basal rot resistance. Funded by Minority Biomedical Research Support - Research Initiative for Scientific Enhancement (MBRS-RISE) program. *Second year of project.*
- 6) Determining the bulbing daylength sensitivity for plant introductions in the U.S. onion collection. Funded by NPGS, USDA. *Second year of project.*
- 7) Screening 'NuMex' onion varieties for cold tolerance. *Third year of project.*
- 8) Onion genetic improvement. Funded by New Mexico Agricultural Experiment Station. *Fourth year of project.*
- 9) Fall-seeded, transplanted, spring-seeded onion variety trials. Funded by commercial seed companies. *Three manuscripts published.*
- 10) Different fall planting dates on plant growth, bolting, and bulb yield of fall-planted onion cultivars. Funded by NMDOC. *Project complete.*
- 11) Heritability of bolting, pink root, Fusarium basal rot, and percentage of single centers in two fall-planted, open-pollinated onion populations. Funded by the NMDOC. *Project complete.*
- 12) Screening for Fusarium basal rot resistance in onions. Funded by NPGS, USDA. *Project complete. One manuscript published.*

13) Comparison of open-pollinated and hybrid onion varieties for New Mexico.

*Project complete. One manuscript published.*

14) Gain in onion bulb yield and quality traits using phenotypic recurrent selection

of three open-pollinated populations. *Project complete. One manuscript published.*

Co-investigator for the following area of research:

1) The Oasis Food Guild – A student-managed project for community supported agriculture in arid lands. Funded by Hispanic-Serving Institutions Education Grants Program, The Cooperative State Research, Education, and Extension Service, USDA. *First year of project.*

2) *Agrobacterium*-mediated genetic transformation of *Allium fistulosum* and *Allium cepa*. *First year of project.*

3) Fall-seeded and transplanted onion variety trials in Clovis, NM. *First year of project.*

4) Spring-seeded onion variety trials in Farmington, NM. *Second year of project.*

**(3) Nature and scope of research areas including responsibility in the above projects (see above).**

(a) *Scientific leadership roles*

Member of Root and Bulb Vegetable Crop Advisory Committee, USDA

(b) *Administrative leadership roles*

Chair of organizing committee for 2000 NM Onion Conference.

From 1997-2002, I have supervised 2 senior research specialists, 2 research assistants, 5 graduate students, 4 international students, and 58 undergraduate students that have worked with my research program.

**(4) Percent research time.**

Percent research time averages 75-80%.

**(5) Other.**

**(a) Grant proposals funded**

Improving the Economic Viability of the New Mexico Onion Industry.

Investigator – Chris Cramer

Funded by the NM Dry Onion Commission for \$100,000 (2002).

Regeneration of Short-day Onions

Investigator – Chris Cramer

Funded by the NPGS, ARS, USDA for \$10,000 (2001).

The Oasis Food Guild – A student-managed project for community supported agriculture in arid lands

Investigators - Connie Falk, Paul Bosland, and Chris Cramer

Funded by Hispanic-Serving Institutions Education Grants Program, The Cooperative State Research, Education, and Extension Service, USDA, for \$147,406, 3 years, (2001)

Effect of Different Fall Planting Dates on Plant Growth, Bolting, and Bulb Yield of Fall-Planted Onion Cultivars

Investigator – Chris Cramer

Funded by the NM Dry Onion Commission for \$7,520 (2001).

Heritability of Bolting, Pink Root, Fusarium Basal Rot, and Percentage of Single Centers in Two Fall-Planted, Open-Pollinated Onion Populations

Investigator – Chris Cramer

Funded by the NM Dry Onion Commission for \$8,520 (2001).

Determining the Bulbing Daylength Sensitivity for Plant Introductions in the U.S. Onion Collection

Investigators – Chris Cramer and Bill Randle

Funded by the NPGS, ARS, USDA Germplasm Evaluation for \$16,068 (2001).

Screening of Short-day Onion Germplasm for Fusarium Basal Rot Resistance

Investigator – Chris Cramer

Funded by the NPGS, ARS, USDA Germplasm Evaluation for \$6,244 (2000).

Development of Improved Onion Varieties for New Mexico

Investigator – Chris Cramer

Funded by the NM Dry Onion Commission for \$169,000 (1997-2002).

Onion Research Equipment

Investigator – Chris Cramer

Funded by the NM Dry Onion Commission for \$7,517 (1998).

Onion Genetic Improvement

Investigator – Chris Cramer

Funded by the New Mexico Agricultural Experiment Station for \$55,000 (1998-2002).

**(b) Other funding.**

1. Foundation seed sales money from New Mexico Crop Improvement Association, 1997-2002, \$18,239.60
2. Royalties payment money from New Mexico Crop Improvement Association, 1997-2002, \$26,792.65
3. Onion variety trailing, gifts, and counting block observation monies from commercial seed companies, 1997-2001, \$24,225

**(c) Awards.**

1. L. M. Ware Distinguished Research Award, Southern Region, American Society for Horticultural Science, 1997
2. First Place Paper Award, Collegiate Branch Forum, American Society for Horticultural Science, 1991

**(d) Research Improvement.**

1. Group Leader for “Publish Don’t Perish. Write More and Worry Less”, A Faculty Development Program, Dr. Tara Gray, Program Director, New Mexico State University, Las Cruces, NM, Spring Semester 1999.
2. Participated in “Publish Don’t Perish. Write More and Worry Less”, A Faculty Development Program, Dr. Tara Gray, Program Director, New Mexico State University, Las Cruces, NM, Spring Semester 1998.

**b. *Professional Communications*****(1) Publications.**Book Chapters

Cramer, C.S. and T.C. Wehner. 2002. Path coefficient analysis. In: M. S. Kang

(ed.). Formulas, Softwares, and Techniques for Geneticists and Breeders. Food Products Press, New York (in press).

Cramer, C.S. and M.P. Bridgen. 1997. I. 16. Micropropagation of *Mussaenda* cultivars, p. 214-224. In: Y.P.S. Bajaj (ed.). Biotechnology in agriculture and forestry. vol. 40. High-Tech and micropropagation VI. Springer-Verlag, Berlin/Heidelberg.

#### Cultivar Releases and Plant Variety Protections (PVP)

Corgan, J.N. and C.S. Cramer. 2001. NM 162 and NM 182 onion germplasm. N.M. Agric. Expt. Stn. Germplasm Rel.

Corgan, J.N. and C.S. Cramer. 2000. 'NuMex Chaco' onion cultivar release. N.M. Agr. Expt. Stn.

Corgan, J.N. and C.S. Cramer. 2000. 'NuMex Snowball' onion cultivar release. N.M. Agr. Expt. Stn.

Cramer, C.S. and J.N. Corgan. 2002. 'NuMex Camino' onion cultivar release. N.M. Agr. Expt. Stn.

Cramer, C.S. and J.N. Corgan. 2002. 'NuMex Crimson' onion cultivar release. N.M. Agr. Expt. Stn.

Cramer, C.S. and J.N. Corgan. 2002. 'NuMex Solano' onion cultivar release. N.M. Agr. Expt. Stn.

Cramer, C.S. and J.N. Corgan. 2001. 'NuMex Chaco' onion. Plant variety protection certificate no. 200000352.

Cramer, C.S. and J.N. Corgan. 2001. 'NuMex Snowball' onion. Plant variety protection certificate no. 200000351.

Journal Articles

- Cramer, C.S. and J.N. Corgan. 2002. 'NuMex Crimson' onion. HortScience (in press).
- Cramer, C.S. and J.N. Corgan. 2002. 'NuMex Solano' onion. HortScience (in press).
- Cramer, C.S. and J.N. Corgan. 2001. 'NuMex Chaco' onion. HortScience 36:1337-1338.
- Cramer, C.S. and J.N. Corgan. 2001. 'NuMex Snowball' onion. HortScience 36:1339-1340.
- Cramer, C.S. 2001. Comparison of open-pollinated and hybrid onion varieties for New Mexico. HortTechnology 11:119-123.
- Cramer, C.S. 2000. Breeding and genetics of Fusarium basal rot resistance in onions. Euphytica 115:159-166.
- Cramer, C.S. and T.C. Wehner. 2000. Path analysis of the correlation between fruit yield and yield components of cucumber populations. HortScience.35:708-711.
- Cramer, C.S. 1999. Lab techniques for determining ploidy in plants. HortTechnology 9:954-956.
- Cramer, C.S. and M.J. Havey. 1999. Morphological, biochemical, and molecular markers of onions. HortScience 34:589-593.
- Cramer, C.S. and T.C. Wehner. 1999. Little heterosis for yield and yield components in hybrids of six cucumber inbreds. Euphytica 110:101-110.
- Cramer, C.S. and T.C. Wehner. 1999. Testcross performance of three selection cycles from four pickling cucumber populations. J. Amer. Soc. Hort. Sci.

- 124:257-261.
- Cramer, C.S., T.C. Wehner, and S.B. Donaghy. 1999. PATHSAS: A SAS computer program for path coefficient analysis of quantitative data. *J. Hered.* 90:260-262.
- Cramer, C.S. and M.P. Bridgen. 1998. Growth regulator effects on plant height of potted *Mussaenda* 'Queen Sirikit'. *HortScience* 33:78-81.
- Cramer, C.S. and T.C. Wehner. 1998. Fruit yield and yield component means and correlations of four slicing cucumber populations improved through six to ten cycles of recurrent selection. *J. Amer. Soc. Hort. Sci.* 123:388-395.
- Cramer, C.S. and T.C. Wehner. 1998. Performance of three selection cycles from four slicing cucumber populations hybridized to a tester. *J. Amer. Soc. Hort. Sci.* 123:396-400.
- Cramer, C.S. and M.P. Bridgen. 1997. Somatic embryogenesis and shoot proliferation of *Mussaenda* cultivars. *Plant Cell, Tissue, and Organ Culture* 50:135-138.
- Wehner, T.C. and C.S. Cramer. 1996. Gain for pickling cucumber yield and fruit shape using recurrent selection. *Crop Sci.* 36:1538-1544.
- Wehner, T.C. and C.S. Cramer. 1996. Ten cycles of recurrent selection for fruit yield, earliness, and quality in three slicing cucumber populations. *J. Amer. Soc. Hort. Sci.* 121:362-366.

### Proceedings

- Cramer, C.S. 2002. Current and future objectives of NMSU onion breeding program, pp. 12-15. In: R.F. Bevacqua and T.R. Cardenas (eds.) *Onion Production and Marketing in New Mexico*. Proc. Onion Conf. March 6, 2002, Las

Cruces, NM.

Cramer, C.S., J.N. Corgan, J.L. Mendoza, and M.M. Wall. 2001. Onion breeding research at New Mexico State University, pp. 202-204. In: B. Randle (ed.). *Alliums 2000. Proc. The 3<sup>rd</sup> International Symposium on Edible Alliaceae.* Athens, GA.

Wall, M.M., J.N. Corgan, C.S. Cramer, S. Walker, and J.L. Mendoza. 2001. Development of low pungency onion cultivars for New Mexico, pp. 251-253. In: B. Randle (ed.). *Alliums 2000. Proc. The 3<sup>rd</sup> International Symposium on Edible Alliaceae.* Athens, GA.

Cramer, C.S., J.L. Mendoza, and J.N. Corgan. 1998. Fall-planted onion variety trials at New Mexico State University, p. 299-312. In: R.E. Voss (ed.). *Proc. 1998 Natl. Onion (and Other Allium) Res. Conf. Veg. Res. Info. Ctr., Univ. Calif., Davis, Calif.*

Cramer, C.S., M.M. Wall, and J.N. Corgan. 1998. Onion breeding research at New Mexico State University, p. 54-73. In: R.E. Voss (ed.). *Proc. 1998 Natl. Onion (and Other Allium) Res. Conf. Veg. Res. Info. Ctr., Univ. Calif., Davis, Calif.*

Cramer, C.S. and T.C. Wehner. 1998. Fruit yield and yield components of cucumber populations grown at low planting density, p. 277-285. *Cucurbitaceae '98, evaluation and enhancement of cucurbit germplasm (Ed. J. D. McCreight).* ASHS Press, Alexandria, VA.

Cramer, C.S. and T.C. Wehner. 1998. Yield components in cucumber: an overview, p. 271-276. *Cucurbitaceae '98, evaluation and enhancement of cucurbit germplasm (Ed. J. D. McCreight).* ASHS Press, Alexandria, VA.

### Experiment Station Bulletins and Reports

Cramer, C.S., J.L. Mendoza, and M.M. Wall. 2002. 2000-2001 Onion variety trials at New Mexico State University. N.M. Agric. Expt. Sta. Res. Rpt. 748.

Cramer, C.S. and J.L. Mendoza. 2001. Hybrid performance of male-sterile and pollinator inbred onion lines. N.M. Agric. Expt. Sta. Res. Rpt. 746.

Cramer, C.S., J.L. Mendoza, and M.M. Wall. 2001. 1999-2000 Onion variety trials at New Mexico State University. N.M. Agric. Expt. Sta. Tech. Rpt. 38.

Cramer, C.S., M. O'Neill, C. Owen, and .K. Kohler. 2001. Onions – New Mexico spring planted variety trial, pp. 68- 71. In: NMSU Agricultural Science Center – Farmington. 2000 Annual Report.

Cramer, C.S., M. O'Neill, C. Owen, and .K. Kohler. 2001. Onions – Over winter survival trial, pp. 65- 67. In: NMSU Agricultural Science Center – Farmington. 2000 Annual Report.

Cramer, C.S., J.N. Corgan, J.L. Mendoza, and M.M. Wall. 2000. 1998-1999 Onion variety trials at New Mexico State University. N.M. Agric. Expt. Sta. Res. Rpt. 739.

Cramer, C.S., J. Gregory, C. Owen, and M. O'Neill. 2000. NMSU Agricultural Science Center – Farmington. 1999 Annual Report. 58-60.

Cramer, C.S. 1998. Onion genetic improvement. Hatch project outline. N.M. Agric. Expt. Sta.

### Cooperative Extension Reports

Corgan, J., M. Wall, C. Cramer, T. Sammis, B. Lewis, and J. Schroeder. 2000. Bulb onion culture and management. NM Coop. Ext. Serv. Circ. 563. 16 pp.

Cramer, C.S. 2002. Current and future objectives of NMSU's onion breeding program, pp. 10-12. In: R. Bevacqua (ed.) Onion Production and Marketing in New Mexico. N.M. Coop. Ext. Serv. Circ. 577.

Cramer, C.S. 2000. New Mexico onion varieties. N.M. Coop. Ext. Serv. Circ. 567, 7 pp.

#### Other Publications

Lopez, J.A. and C.S. Cramer. 2001. Screening NPGS short-day onion accessions for resistance to Fusarium basal rot. Allium Improv. Newsl. 10:29-31.

Cramer, C.S. and J.L. Mendoza. 2000. Gain in onion bulb yield and quality traits using phenotypic recurrent selection of three open-pollinated populations. Allium Impr. Newsl. 9:5-7.

Cramer, C.S. and T.C. Wehner. 2000. Fruit yield and yield component correlations of four pickling cucumber populations. Cucurbit Genet. Coop. Rep. 23:12-15.

Cramer, C.S. and T.C. Wehner. 2000. Testing method and the correlation between cucumber fruit yield and yield components. Cucurbit Genet. Coop. Rep. 23:16-20.

Corgan, J.N., M.M. Wall and C.S. Cramer. 1998. Onion genetic improvement at New Mexico State University. Allium Improv. Newsl. 7:1-3.

Cramer, C.S. and T.C. Wehner. 1998. Stand correction methods for cucumber fruit yield. Cucurbit Genet. Coop. Rpt. 21:18-20.

Bridgen, M.P. and C.S. Cramer. 1993. Give mussaenda a try as a novelty selection. Greenhouse Manager. October 1993. pp. 78-81.

Cramer, C.S. 1991. The use of growth retardants with *Chrysanthemum morifolium*. Pennsylvania Flower Growers Bulletin. November-December 1991. pp. 1-3.

**(2) Papers Presented** (national meetings)

Third National Small Farm Conference. Title: Oasis CSA.

XXVIth International Horticultural Congress & Exhibition. Title: Screening short-day onion lines for Fusarium basal rot resistance.

2002 Meeting of the Agriculture, Food and Human Values Society. Title:

OASIS: Student-managed Organic Community Supported Agriculture farm.

2001 National Meeting of the American Society for Horticultural Science. Title:

Performance of fall-planted onion cultivars at four planting dates.

Alliums 2000. The 3<sup>rd</sup> International Symposium on Edible Alliaceae. Title: Onion breeding research at New Mexico State University.

Alliums 2000. The 3<sup>rd</sup> International Symposium on Edible Alliaceae. Title:

Development of low pungency onion cultivars for New Mexico.

2000 National Meeting of the American Society for Horticultural Science. Title:

Hybrid performance of male-sterile and pollinator inbred onion lines

1998 National Onion Research Conference. Title: Fall-planted onion variety trials at New Mexico State University.

1998 National Onion Research Conference. Title: Onion breeding research at New Mexico State University.

Cucurbitaceae 98. Title: Fruit yield and yield components of cucumber populations grown at low planting density.

Cucurbitaceae 98. Title: Yield components in cucumber.

1998 National Meeting of the American Society for Horticultural Science. Title:

Laboratory techniques for determining ploidy levels. (invited)

- 1997 National Meeting of the American Society for Horticultural Science. Title: Heterosis and inbreeding depression for yield of pickling cucumber (*Cucumis sativus* L.) hybrids.
- 1996 National Meeting of the American Society for Horticultural Science. Title: Recurrent selection for specific combining ability for yield in four pickling cucumber populations.
- 1996 Southern Region Meeting of the American Society for Horticultural Science. Title: Recurrent selection for specific combining ability for yield in four slicing cucumber populations.
- 1995 Pickle Packers International Meeting. Title: Gain from 9-10 cycles of recurrent selection in 3 pickling cucumber populations.
- 1994 National Meeting of the American Society for Horticultural Science. Title: Growth regulator effects on height control of potted *Mussaenda* 'Queen Sirikit'.
- 1994 Northeast Region Meeting of the American Society for Horticultural Science. Title: Somatic embryogenesis of *Mussaenda* 'Queen Sirikit'.
- 1993 National Meeting of the American Society for Horticultural Science. Title: In vitro shoot proliferation of *Mussaenda* 'Doña Luz'.
- 1993 Northeast Region Meeting of the American Society for Horticultural Science. Title: Effect of daminozide, ancymidol and paclobutrazol on height control of potted *Mussaenda*.
- 1991 National Meeting of the American Society for Horticultural Science. Title: Hybridization between diploid and tetraploid *Pelargonium x hortorum* Bailey.

**(3) Other speeches and talks related to research**

2002 NMSU Onion Field Day, Title: Onion breeding program (oral presentation).

2002 New Mexico Onion Conference, Title: Current and future objectives of NMSU onion breeding program (oral presentation).

2001 NMSU Onion Field Day, Title: Onion breeding program (oral presentation).

2001 NMSU College of Agriculture and Home Economics All-College Conference. Title: New Mexico State University Onion Breeding Program (poster presentation).

2000 New Mexico Onion Conference, Title: NMSU onion breeding program (oral presentation)

2000 New Mexico Onion Conference, Title: Commercial onion varieties for New Mexico (oral presentation).

2000 New Mexico Onion Conference, Title: 1998-1999 Fall-planted variety trials at New Mexico State University (poster presentation).

2000 New Mexico Onion Conference, Title: 1999 Spring-planted variety trials at New Mexico State University (poster presentation).

2000 New Mexico Onion Conference, Title: 1999 Transplanted variety trials at New Mexico State University (poster presentation).

2000 New Mexico Onion Conference, Title: New Mexico State University onion breeding program (poster presentation).

2000 Agricultural Science Center at Farmington Field Day, Title: Overwintering survival trial (oral presentation).

2000 NMSU Onion Field Day, Title: Onion breeding program (oral presentation).

2002, 2001, 2000, 1999, 1998, 1997 New Mexico Dry Onion Commission

Meetings. Title: Development of improved onion varieties for New Mexico (oral presentation).

2002, 2001, 2000, 1999, 1998, 1997 New Mexico Crop Improvement Association

Board Meetings. Title: Onion cultivar development at NMSU (oral presentation).

1999 NMSU Onion Field Day, Title: Onion breeding program (oral presentation).

1998 NMSU Onion Field Day, Title: Onion breeding program (oral presentation)

1998 NMSU College of Agriculture and Home Economics All-College Conference.

Title: The NMSU Onion Breeding Program (poster presentation).

1996 Pickling Cucumber Improvement Committee Meeting. Title: Correlations

between fruit yield and yield components in four pickling cucumber populations

(poster presentation).

1995 North Carolina Vegetable EXPO. Title: Yield improvement of pickling

cucumbers (poster presentation).

#### **4. Other Service**

##### **a. *Departmental***

Department Hatch Project Outline Review Committees for the following researchers:

Bob Bevacqua, Paul Bosland, Roy Cantrell, Steve Guldán, Mary O'Connell, Mick O'Neill, Greg Phillips, Geno Picchioni, Marisa Wall

Coordinator for departmental growth chambers.

New student orientation committee member.

Scholarship committee member.

Horticulture curriculum committee member.

Search committee for Assistant Professor of Horticulture, vegetable physiology, 2002.

Search committee for Assistant Professor of Agronomy, cotton breeding, 2002.

Search committee for Assistant Professor, ornamental horticulture, 1999.

Recruited potential graduate students for the department at the ASHS meetings in 1999, 2000, 2001, 2002.

Wrote and placed advertisements in the April issue of ASHS Newsletter, issues of HortOpportunities, and March issue of Agronomy News for departmental graduate assistantships.

Advisor to Horticulture Forum.

Participated in departmental recruitment efforts during Spring Visitor's Day, 2000.

Made presentation to 4-H conference for department, 1999.

Represented department at Arts & Sciences Student Fair, Corbett Student Center, NMSU, 1998.

**b. *College***

Search committee for Fabian Garcia Research Center/Leyendecker Plant Science Research Center Superintendent position, 2002.

Search committee for Cooperative Extension Vegetable Specialist position.

FFA competitions, judge for produce, floriculture contests, 1999, 2000, 2001, 2002.

**c. *Extension***

Meet with the New Mexico Dry Onion Commission

Meet with the New Mexico Crop Improvement Association Board of Directors

NMSU Onion Field Day, organizer and speaker, annually 1998-2002.

2000 NM Onion Conference, organizer and speaker.

Farm visits with onion growers and shippers (annually).

Provide tours of research fields to growers, salespersons, marketing directors, breeders, researchers, NM Dry Onion Commission, and industry executives (annually)

Agricultural information news releases and radio interviews.

Correspond with homeowners regarding vegetable gardening and onion varieties (annually).

Correspond with personnel from Coop. Ext. Serv. and research stations regarding vegetable and onion production (annually).

Developed webpage for onion breeding program (onion.nmsu.edu).

Research fields listed as Millennium Garden by USDA, 2000.

Wrote three extension publications for onion industry.

Conduct variety trials for onion industry (annually).

Work with reporters and writers from the 2000 NMSU President's Report, Las Cruces Sun News, Associated Press, El Paso Times, New Mexico Resource Magazine, Onion World, Albuquerque Journal, New Mexico Business Times, and The Packer to write stories about onions (see articles in Appendix).

Provided tour of research facility and growers' fields to Ms. Tanya Fell, Marketing and Membership Director, National Onion Association, 1999.

Assisted NM Dry Onion Commission and Agricultural Communications in the development of a New Mexico Onion Promotion Video with regards to script, video shots, editing, and cover design, 1999.

Provided tour and explanation of onion breeding research efforts to Finance Committee of the Commission for Higher Education and NMSU Administrators, Fabian Garcia Agricultural Science Center, Las Cruces, NM, 1999.

Provided vegetable varietal selection assistance for Mr. Ishaya Shekarri, chairman, Magami Holdings Limited, Lagos, Nigeria and Dr. Van Bullock, NMSU, 1999.

Met with Mr. Harry Westbeek, Belize about onion production in Central America, 1999.

Toured worldwide headquarters of Seminis Vegetable Seeds, Inc., and Empire Research 1998.

Toured Center for Engineering Plants Resistant Against Pathogens (CEPRAP) Facility, 1998.

Submitted information for New Mexico Resource Returns web pages, 1998.

Consulted on onion production for NAPI project, Farmington, NM, 1998.

**d. *University***

Judge for Southwestern New Mexico Science and Engineering Fair, Corbett Center Auditorium, New Mexico State University, Las Cruces, NM, 1998, 1999, 2001.

Participated as Judge for 1999 Graduate Research & Arts Symposium, NMSU Graduate School, Las Cruces, NM, 1999.

Participated as Group Leader in “Publish Don’t Perish. Write More and Worry Less”, A Faculty Development Program, Dr. Tara Gray, Program Director, New Mexico State University, Las Cruces, NM, Spring Semester 1999.

**e. *Community***

Gleaned extra onions, chile peppers, apples, pears, almonds, and peaches produced on university fields through the Society of St. Andrew and donated gleaned produce to local hunger relief agencies.

Provided extra onions from research programs to the Society of St. Andrew for gleaning.

**f. *State***

New Mexico FFA conference judge for the horticultural competitions.

Judge for the Southwestern New Mexico Science and Engineering Fair.

**g. *Nation***

Maintenance of short-day onion germplasm in USDA collection.

**h. *Profession***

Appointed to the Centennial Meeting Planning Committee, American Society for Horticultural Science.

Appointed to the Graduate Educator Career Award Committee, American Society for Horticultural Science (Chair, 1997-98).

Membership Recruitor for New Mexico State University, American Society for Horticultural Science.

Scholarship Awards Committee, American Society for Horticultural Science (1997-2001).

Secretary, Gamma Sigma Delta, New Mexico Chapter (2000-2002).

Served as associate editor for publishing workshop proceedings in HortTechnology, 1998.

Reviewer of manuscripts for Journal of the American Society for Horticulture Science, HortTechnology, Theoretical and Applied Genetics, HortScience, Crop Science, Molecular Ecology, Journal of Soil Science Society of America, New Mexico Journal of Science

**i. *Industry***

Maintenance of short-day onion germplasm in USDA collection.

Perform crosses between commercial inbreds and inbreds from our program for the development of cooperative hybrids.

Observational trials for experimental commercial lines.

Variety trials for commercial varieties.

Provided space in onion counting block for commercial lines.

Determining the bulbing daylength sensitivity for plant introductions in the U.S. onion collection.

Screening short-day onion germplasm for Fusarium basal rot resistance.

**6. Professional Societies**

**a. *Member***

American Society for Horticultural Science (1989-2002)

Cucurbit Genetics Cooperative (1994-2000)

Gamma Sigma Delta (Honor Society of Agriculture), Secretary, New Mexico State Chapter (2000-2002)

National Association of Colleges and Teachers of Agriculture (1997-2002)

New Mexico Academy of Science (1998-2002)

**a. *Honorary***

Omicron Delta Kappa, National Leadership Honorary

Phi Kappa Phi, National Academic Honor Society

Pi Alpha Xi, Honor Society for Floriculture, Landscape Horticulture, and Ornamental  
Horticulture

**7. International Activities**

Collaboration with onion breeding program at Universidad Autonomia de Chihuahua,  
Delicias, Chihuahua, Mexico.

Provided summer internship for three students from the College of Agriculture, National  
University of Colombia, 1999, 2000.

Met with Mr. Harry Westbeek, Belize about onion production in Central America, 1999.

Provided vegetable varietal selection assistance for Mr. Ishaya Shekarri, chairman, Magami  
Holdings Limited, Lagos, Nigeria, 1999.