agriculture (Sleper et al, 1991). Utilizing the very extensive yield trial database developed by the cooperators of the NE-107 project, a very robust and predictable multi-variate model could be developed for specific crop characteristics in our various production areas. Once such response patterns can be recognized, they will provide guidance in more accurately and quickly screening new genotypes for suitable production sites and uses. These techniques will also enable growers to more quickly adopt new genotypes and grow them in an economical and environmentally sound manner.

The NE-107 project represents one of the largest crop trial systems in the world. The database provides a unique opportunity to test the usefulness of some of the most modern and advanced statistical methodology specially developed to handle unsymetrical datasets. Research results would also provide insight on the applicability to analysis of other crop systems.

In the next five years, the four potato breeding programs in the Northeast region will conduct breeding studies to understand the genetic mechanisms involved in the expression of resistance to various diseases, insect pests, and physiological disorders and enhance the germplasm base for quality traits that are important for emerging markets. Such studies can only be undertaken in a regional approach, since each program has limited resources and each particiating institution has an expert in one or more specific areas under investigation. Combining efforts in such a regional approach reduces duplication, reduces research costs, and benefits everyone in the region. Promising selections identified as the result of these genetic studies will then be grown on a wider scale and evaluated for a wide range of other traits which are equally as important in determining whether a potential cultivar will be accepted or not. The identification and quantification of significant climatic and cultural effects on the performance of potato selections is necessary to make meaningful recommendations to growers and enable them to choose the cultivar best suited to their growing environment and their anticipated marketing niche. Substantial progress has been made in the NE-107 project in the past five years. Results of this previous research will begin to be observed in the next five years, when selections with improved quality traits for emerging markets and resistance to internal heat necrosis, scab, Colorado potato beetle, golden nematodes, root lesion nematodes, late blight or early blight begin to enter the regional trials for wide-scale evaluation.

Scientists, growers and industry representatives are kept informed of the evaluations in these wide-scale trials through the publication of the NE-107 Annual Report. Extension agents use the NE-107 Annual Report in conducting series of grower meetings held during the winter months. Information developed through the NE-107 project is crucial to these growers and industry representatives. The scientists associated with the NE-107 Project meet yearly in January to discuss results and plan future research.

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VI. ORGANIZATION

The regional technical committee is composed of all participating cooperators (see Section 11, attachments), an administrative advisor (Dr. Robert C. Seem) appointed by the Northeast Agricultural Experiment Station Directors, and a CSRS Representative (Dr. James V. Parochetti). The technical committee meets at least once each year to discuss progress of the research, review procedures, coordinate research and plan future research activities. Voting privileges are restricted to one member from each participating unit (see Section 11, attachments).

The regional technical committee will elect an executive committee composed of a chair, vice-chair, and secretary. A succession of officers will be maintained so that the vice-chair becomes chair, the secretary becomes vice-chair, and a new secretary is elected each year. The responsibilities of the executive committee members are as outlined in the Manual for Cooperative Regional Research. The chair will preside at all meetings of the technical committee and is responsible for organizing the agenda of the annual meeting. The vice-chair will prepare the annual report for the project. The secretary will prepare the minutes of the annual meeting and any special meetings. The administrative advisor is responsible for distributing the minutes and submitting the annual report and minutes to the CSRS representative and other interested parties.

Participation by Agriculture and Agri-Food Canada, Provinces of Quebec and Prince Edward Island, Maine Department of Agriculture, Cooperative Extension, and Industry representatives is at the invitation of the Technical Committee with the approval of the Administrative Advisor.

VII. SIGNATURES

Regional Project Title: Development of New Potato Clones for Environmental and Economical Sustainability in the Northeast

Administrative Advisor — Date: 7/11/96

Chair, Regional Association of Directors — Date: 7-11-96

Administrator, CSREES — Date: 4-4-97

ATTACHMENTS

1. Project Leaders

Agency	Project Leaders	Area of Specialization
Agriculture and Agri-Food Canada	H. DeJong*	Genetics & Variety Dev.
	R. Tarn	Variety Development
	G.C.C. Tai	Quantitative Genetics
	A.M. Murphy	Pathology
	W. Arsenault	Adaptation & Culture
Canada-PEI	P. Boswall	Adaptation & Culture
Canada-Quebec	B. Otrysko*	Pathology
	G.J. Banville	Pathology
Delaware	W.E. Kee*	Adaptation & Culture
Maine	G.A. Porter*	Physiology & Culture
	A.F. Reeves	Breeding & Genetics
	D.H. Lambert	Pathology
	A. Bushway	Food Science
	R. Bushway	Biochemistry
	J. Sisson	Adaptation & Culture
	T. Work	Food Science
	T.L. Bourgoin	Seed Production
	F. Mehdizadegan	Seed Production
	E.S. Plissey	Cultural Practices
New Jersey	M.R. Henninger*	Adaptation & Air Pollut.
New York	J.B. Sieczka*	Adaptation & Culture
	R.L. Plaisted	Variety Development
	D.D. Moyer	Adaptation & Culture
	W. Fry	Pathology
	W.M. Tingey	Entomology
	D.E. Halseth	Adaptation & Culture
North Carolina	C. Yencho	Breeding, Genetics & Adaptation
Ohio	R. Hassell	Cultural Practices
Pennsylvania	M. Orzolek	Adaptation & Culture
	B.J. Christ	Pathology
Virginia	S.B. Sterrett*	Culture & Physiology
USDA-ARS Beltsville	K.G. Haynes*	Genetics & Variety Dev.
	R.W. Goth	Pathology
	K. Deahl	Pathology
	Vacant	Physiology
	K. DeLong	Culture
Plant Protection ResearchUnit, Ithaca	B.B. Brodie*	Nematology
New England Plant, Soil and Water Lab	Vacant	Pathology
Industry Cooperators		
Agway, Inc.	R. Carey	
	G. Richards	
	R.D. Moore	
McCains	D. Ronis	

Troyer Farms, Inc.	M. Troyer
Wise Foods, Inc.	S. Molnar
CSRS	J.V. Parochetti
Administrative Advisor	R. Seem

*Indicates Voting Member

2. Resources

	Scientist Years	Professional Years	Technical Years
Agriculture and Agri-Food Canada	0.1	---	0.2
Delaware	---	0.1	---
Maine	0.6	1.5	0.7
New Jersey	0.3	---	---
New York	0.7	0.9	2.45
North Carolina	0.1	---	0.1
Ohio	0.1	---	0.1
Pennsylvania	0.49	0.5	0.5
PEI	0.05	---	0.1
Quebec	0.05	---	0.1
Virginia	0.2	---	0.2
West Virginia	0.3	---	0.25
USDA/ARS/BARC	1.3	1.3	3.0
Ithaca	0.1	---	0.1
Orono	0.1	---	---
TOTAL	4.1	4.3	7.8