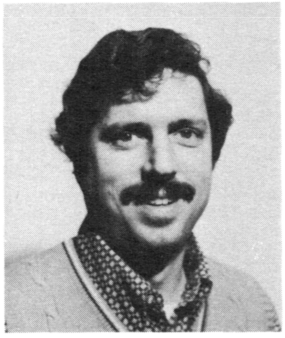
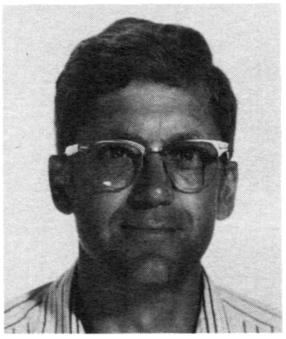
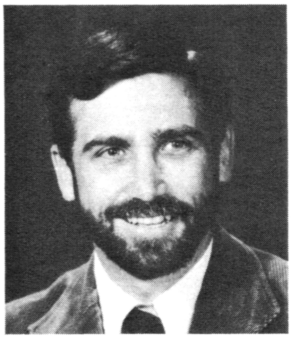
Presiding over the symposium was D.J. Cantliffe.

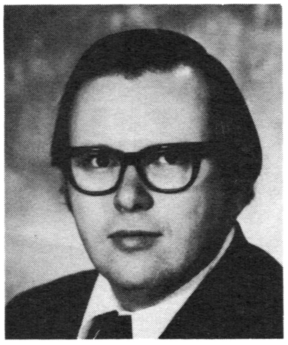

A. Abdul-Baki

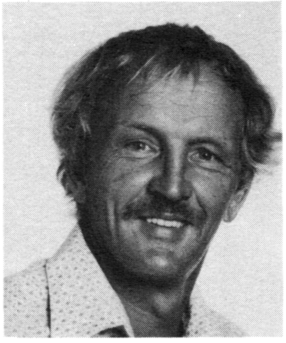

D.J. Cantliffe


J.C. Delouche


M.H. Dickson


M.B. McDonald, Jr.


E.E. Roos


E.C. Tigchelaar

INTRODUCTION TO THE SYMPOSIUM

D.J. Cantliffe
Vegetable Crops Department, University of Florida, Gainesville, FL 32611

E.C. Tigchelaar
Department of Horticulture, Purdue University, West Lafayette, IN 47907

The importance of good quality, highly vigorous seed for agricultural production of crop plants cannot be overemphasized. With the ever increasing demands for a mechanized, energy-efficient type of agriculture, we have come to the stage where one plant is expected for every seed sown. Moreover, modern agriculture demands that each emerging plant grow and develop uniformly under a wide range of environmental conditions. The recent development of precision seeding equipment for small-seeded crops, improvements in chemical weed control, and the need for high plant populations and uniform plant stands for machine harvest has led to a growing interest in direct field seeding.

Seed quality involves more than genetic purity and high viability. Ability to germinate uniformly under suboptimal conditions of soil temperature and moisture frequently is required for satisfactory early crop establishment. Seed vigor ratings have been devised for certain crops to estimate this ability to perform under less than ideal conditions; however, use of seed vigor to predict emergence has not been widely applied to vegetable crops. Recently, the Association of Official Seed Analysts defined seed vigor as *"those seed properties which determine the potential for rapid uniform emergence and development of normal seedlings under a wide range of field conditions."*

The purpose of this symposium is to focus on the genetic, biochemical, and environmental factors regulating seed germination and vigor to facilitate establishment of uniform crop stands.