## INTRODUCTION

Agricultural universities worldwide face numerous challenges including increasingly limited resource allocations, declining enrollment, keeping up with advances in information and other technologies, remaining aware of and responsive to stakeholders, and the need to aggressively globalize their teaching, research and outreach programs. Although the scale of the problems and the local conditions vary across and among regions, there are remarkable similarities in the fundamental nature of these challenges.

The realization that these are shared challenges, combined with a political and economic climate that lends itself to the lowering of national barriers, presents an environment conducive to global networking and cooperation among universities.

GCHERA grew out of an international conference held in 1998 in Kiev, which marked the 100<sup>th</sup> anniversary of the National Agricultural University of Ukraine and the completion of a four-year university linkage project involving many institutions around the world and financed by the United States Information Service. The consortium was formed as a result of shared concern for the future of the planet and a conviction that higher education in agriculture should play a key role in solving problems associated with food security and environmental sustainability. The consortium aims to include and serve institutions with programs in agriculture, veterinary medicine, and natural resources management, including the biological, physical and social sciences dimensions of these fields. The founders designed the organization to be helpful to institutions worldwide that are working to make significant reforms in their systems of higher agricultural education. Currently, the consortium has approximately 400 members from more than 100 countries.

The consortium is governed by a regionally balanced Executive Committee and led by a President. Global meetings of the consortium are held every two years, the first having been held in Amsterdam (Netherlands) in 1999. Subsequent conferences were held in San Francisco (USA), Kiev (Ukraine), Hangzhou (China) and San Jose (Costa Rica). This book of proceedings reports on the 6<sup>th</sup> GCHERA conference held in Nairobi, Kenya.

## **FOREWORD**



It is with profound pleasure that we unveil the proceedings of the 6<sup>th</sup> GCHERA Conference that was held in Nairobi, Kenya.

The five-day conference featured eleven technical paper presentations, group discussions, exhibitions and field excursion under the theme "Food, Health and Energy: Challenges for Sustainable Agriculture".

The Organising Committee of the Conference spent long hours to ensure the conference was a success. The challenges faced in organising the conference served as a learning experience for many in the committee. We mainly derived our resilient working spirit from awareness of the fact that it would indeed be a great honour to play host to some of the world's most celebrated agricultural trainers, researchers, policy makers and technology disseminators as they reflect on how to make the discipline more responsive to the needs of our ever changing world.

Let me thank the University management, conference organisers, sponsors, participants, the Government of Kenya and all other stakeholders for their valuable contributions towards the success of the forum. Finally, I thank His Excellency Hon. Mwai Kibaki, CGH, MP, President and Commander-in-Chief of the Armed Forces of the Republic of Kenya for officially opening the conference.

# Storage

Prof. Esther Murugi Kahangi CHAIRPERSON, 6TH GCHERA CONFERENCE ORGANISING COMMITTEE