Agricultural research is facing severe funding crisis globally, and research administrators and scientists are being requested to cut costs and maximize the efficiency of research output. Many laboratories and/or institutes are unable to conduct comprehensive studies due to scarcity of funds, facilities, and expertise. Therefore, the need for collaborative research for the effective utilization of the scarce financial and human resources, to achieve goals and find solutions to important production constraints, is increasingly being realized.

An agricultural research network is a group of individuals or institutions linked together by a commitment to collaborate in solving or addressing a common agricultural problem, or set of problems, and to use existing resources more effectively. Collaborative research networks involve joint planning and conduct of research to address common research interests.

Working Groups

A Working Group, also called a subnetwork, consists of a group of scientists who share a common interest, and are committed to collectively address a high priority regional problem, and to share their research results with others. Working Groups coordinate and stimulate cooperative research by pooling expertise from both developing and developed countries, international research centers, and specialized research laboratories and institutions, to work together on a common platform as equal partners to find quick answers. Working Groups use existing staff and facilities, and avoid duplication of effort.

Advantages of Working Groups

Working Groups (WG) have several advantages in terms of their ability to carry out collaborative research within a network, for e.g., the Cereals and Legumes Asia Network (CLAN):

- Working Groups identify, address, and solve problems that are of high priority to a region more quickly than do institutions or researchers working independently.

• The WG approach allows scientists to initiate a series of discrete research topics when priority problems are identified. These can be terminated once the problem is solved.
• The small size of a WG makes it cost-effective and easy to operate.
• In a network such as CLAN, WGs can share facilities and support one another in such overlapping areas as training, meetings, and workshops.
• The parent network can be used to identify research targets, disseminate results quickly, and provide feedback.

Organization and Structure of Working Groups
The members of a WG include scientists from national programs, international and regional institutions, and advanced research laboratories (Fig.1). Each WG nominates a Technical Coordinator (TC), who is normally an expert on the subject, to liaise, coordinate, and harmonize joint research. The TC is usually supported by a network or institution that provides the necessary administrative and logistic support. The Cereals and Legumes Asia Network supports and coordinates several WGs set up to address specific problems of CLAN's priority crops in the Asia region. Botrytis Gray Mold (BGM) of Chickpea Working Group is one of them.

Botrytis gray mold of chickpea Working Group
Botrytis gray mold (BGM) of chickpea (Cicer arietinum L.) is an important problem in Bangladesh, Nepal, parts of Pakistan, and in the submontane regions of India. This disease has also been recorded in Myanmar. To date, only low levels of resistance to BGM have been found in chickpea. Therefore, an interdisciplinary, collaborative approach was considered necessary to find ways to manage the disease. At the first Working Group Meeting held at Joydebpur, Bangladesh, during 4-8 Mar 1991, participants agreed to join collaborative research activities on BGM (Haware et al. 1992). The work plan envisaged four major research components: surveys, genetic resistance, cultural practices, and epidemiology. A second Working Group Meeting held at Rampur, Nepal, during 14-17 Mar 1993, reviewed the research carried out and developed future research plans for collaborative research under the WG (Haware et al. 1993). This is the third meeting of the WG. The collaborative research carried out under WG over the past 5 years has helped to develop field screening methods and management options for the control of BGM. Research on biological control has been initiated.

Conclusion
In addition to encouraging research collaboration among scientists, WGs help strengthen national programs' capabilities to improve basic and strategic research, and provide answers that can be quickly channelled to farmers for enhanced impact. The critical mass of scientists in a WG address and solve problems at a much faster pace, and thus considerably reduce the 'research lag'.

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Potential for global contribution  
Ability to conduct independent research  
Collaborating component

Figure 1. Structure of a Working Group.

References