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## **INTERNATIONAL COLLABORATION IN DEVELOPING CAF SOLUTIONS**

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### **ABSTRACT**

To improve livelihoods, farmers and traders do more than boost production. They reduce losses, satisfy consumers and improve profitability by enhancing harvesting, drying, transport and marketing systems - with controlled atmosphere and fumigation (CAF) technologies amongst the options used. Currently, 20% of natural resources devoted to production are wasted because the grain is spilt, spoiled, lost or consumed by pests. The global community can no longer afford this waste of resources! In an era of low commodity prices, heightened awareness of quality, and pressures for cost efficiencies, provide additional challenges in the development and use of CAF technologies. This paper will consider 3 areas of opportunity:

- Greater collaboration and co-ordination of international R & D.
- Improving supply chain management and
- Improving use of information, extension and training – understanding: knowledge, aspirations, skills and attitudes.
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*International R & D.* The International Agricultural Research Centres (IARCs) expend less than 2% of their budgets on postharvest R & D and cite inadequate funds as the reason for not devoting more resources to this sector. Global effort in the national research agencies of developed countries is also declining. However, effort and capabilities are increasing in many developing countries, and the private sector is also playing a greater role. Key opportunities for enhancing international collaboration will be in partnerships that bring together the developed, the developing and the private sector. Another key opportunity for grain exporting countries will be to offer a 'total package' which includes tailored research, quality assurance and technical training to their customers.

*Supply chain management.* While pests limit productivity and market access, deficiencies in the supply chain can further affect grain quality and market opportunities. The knowledge that farmers, traders and marketers have of the opportunities, requirements, logistics and linkages

in a particular supply chain is often inaccurate or incomplete. The impact and efficiencies of CAF technologies are often affected by supply chain factors that increase pest and contaminant risks. And as a result, grain quality can be reduced, business expansion stifled and profits reduced. Accurate analysis of the supply chain - the costs, technologies, linkages and parties involved - provides comprehensive data and background information including pest control strategies and standards, and infestation risks, forming a 'road map' from which research priorities can be identified and strategies implemented, to enhance industry growth and sustainability. Such knowledge can also assist processors, traders and farmers to improve CAF technology effectiveness in enhancing the volume and reliability of produce supplies.

*Information, extension and training.* In implementing improvements for pest management within supply chains, access to accurate diagnostic and control information, and understanding the 'hearts and minds' of chain personnel, are key elements to control success. Changes in farm management – increasing off-farm employment and the roles of women also affect technical needs and labour requirements. The risk of 'human error' can be more significant than the risk of system integrity, and focus on this element of pest control within a systems context may be the real key to halving losses.