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SHAREHOLDERS IN SUSTAINABLE DEVELOPMENT

Australia and CIAT

Centro Internacional de Agricultura Tropical
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Australia, a huge island-continent, is part of the Southeast Asian region and shares the Pacific Ocean with hundreds of islands. Because northern Australia straddles the Tropic of Capricorn, many of its agricultural problems are similar to those of its tropical neighbours, encouraging mutual interest in their solutions. Australia continues to develop strong trading and political ties with its Asian and Oceanic neighbours—ties that are essential for its future.

Australia has invested considerable funds in agricultural projects in Southeast Asia and the South Pacific. This reflects political goodwill, the need to improve commercial relations and solve common research problems, and the recognition that Australia's future is intricably linked to Asia and the Pacific. Other areas in which Australia has taken an interest are Africa, the Middle East, and South America.

Historically, Australia shares a common agricultural heritage with Argentina and Uruguay, particularly in broad-acre crops (e.g., wheat) and animal industries (e.g., beef and sheep). More recently, Australia's involvement with South America results from its participation in the activities of the International Center for Tropical Agriculture (CIAT, its acronym in Spanish).

CIAT has as its mission the alleviation of poverty and hunger in the tropics. It applies science to improve agriculture while conserving natural resources. Traditionally, research at CIAT focused on four commodities vital to small farmers and consumers

in the tropics: cassava, common beans, and tropical forages, for which it has a global mandate, and rice, with a regional mandate. In 1992, CIAT embarked on research in natural resource management, with the aim of developing technologies to protect the region's soil, water, and genetic resources as part of the essential need for global sustainability of agricultural production.

To achieve its mission, CIAT works with national agricultural programs, international institutions, and non-governmental organisations. Its headquarters and main research station are located near Cali, Colombia. Five other stations in Colombia provide access to the wide range of ecological conditions needed to ensure relevance of the research. CIAT has also outposted 25 staff to 15 countries around the world, including Southeast Asia (Thailand and Philippines), Africa, and the Americas.

Collaboration with Australian Institutions

Several Australian institutions have had working relationships with CIAT. The more significant among these are the Australian Centre for International Agricultural Research (ACIAR), the Australian International Development Assistance Bureau (AIDAB), the Division of Tropical Crops and Pastures of the Commonwealth Scientific and Industrial Research Organisation (CSIRO), the Crawford Fund for International Agricultural Research, the Queensland Department of Primary Industries (QDPI), and the Universities of Melbourne, New England, Queensland, and Sydney.

Some institutions were represented by visiting scientists and consultants, who worked on a short-term basis at CIAT. For example, Dr. John L. Dillon.

while head of the Department of Agricultural Economics and Business Management at the University of New England, was a member of CIAT's Board of Trustees from 1981 to 1986. During that time he was, first, chairman of the Audit Committee and then of the Program Committee. He is now board chairman at the International Service for National Agricultural Research (ISNAR), The Hague, Netherlands, one of CIAT's sister centres.

Other representatives worked with the Tropical Pastures Program, Cassava Program, and Seed Unit. These included Robert Reid, germplasm specialist from CSIRO's Division of Tropical Crops and Pastures (1981); Bruce Davison, economist from the University of Sydney (1982-1983); David Connor, plant physiologist from the University of Melbourne (1979-1980); and Helen Low, seed specialist and consultant from QDPI (1985).

Australians Employed by CIAT

The first Australian to arrive was Dr. Bert Grof, in 1971, as agronomist to the Tropical Pastures Program. He began developing CIAT's tropical forage germplasm collection while he was based at the Center's headquarters at Palmira. He then moved to Carimagua in Colombia's Eastern Plains, Brasilia in Brazil, and Los Baños in the Philippines, where he now works as consultant.

Dr. Peter Graham, soil microbiologist for the Beef Program, also came in 1971. He was later leader of the Bean Program from 1975 to 1977, and left in 1982. Dr. John Ferguson, forage seed agronomist, has been with the Center since 1974, and is currently working with the Tropical Forages Program. Dr. Douglas Laing

joined as physiologist for the Bean Program in 1974, and became the Center's deputy director general for the Germplasm Development Division in 1978. He held this position until 1992 when he became Director of the Commonwealth Agricultural Bureaux International (CABI) in England.

Other Australians joined the Tropical Pastures Program: Drs. Mark Hutton, plant breeder (1978-1982); Jill Lenné, plant pathologist (1979-1988); Julie Stanton as post-doctoral fellow in plant pathology (1983-1985); and Myles Fisher, pasture ecophysiologist (1985 to present). In 1992, Fisher joined the Savannas Program. In 1986, Elizabeth McAdam de Páez joined CIAT as an associate editor in the Communications Unit.

Australian scientists who recently joined CIAT are Dr. Peter Kerridge, agronomist and leader of CIAT's new Tropical Forages Program (created in 1992); and Dr. William Scowcroft, geneticist, who replaced Laing in July 1993 as CIAT's deputy director general for the Germplasm Development Research Division. He was previously director of the Victorian Institute for Dryland Agriculture in Australia, and has worked with CSIRO's Division of Plant Industry and in the Canadian private sector.

Table 1 provides a summary of Australians who have worked at CIAT since the Center was established in 1967.

A Two-Way Affair

The flow of people has not always been from Australia to the Center. In 1992, the Crawford Fund supported a training and study tour for a Colombian agronomist,

Carlos Ivan Cardozo, to the QDPI at Gympie, Queensland, to study seed production of *Arachis pintoi*, a promising legume for tropical pastures.

In 1987, CSIRO and CIAT collaborated in organising an international workshop on *Centrosema*, a legume genus with potential for tropical pastures. The event, held at CIAT, brought about 10 participants from Australia, as well as from other parts of the world. The proceedings, published by CIAT, were edited by a CIAT staff member and Dr. Robert J. Clements, now Chief of CSIRO's Division of Tropical Crops and Pastures.

That CIAT's work can be directly relevant to Australia is exemplified by 'Rimfire', a canning bean that was released by the QDPI in February 1993. The bean is resistant to rust, a plant disease prevalent in Queensland's bean-growing areas. The cultivar was developed from resistant germplasm introduced from CIAT. The QDPI breeder, Dr. Robert Redden, who helped select it, attended several workshops organised by the CIAT Bean Program.

Financial Contributions from Australia

Through the ACIAR, Australia contributes significant funds to the Consultative Group on International Agricultural Research (CGIAR). This Group distributes donations among 18 international agricultural research institutions, of which CIAT is one. Some special project funds are also provided directly to CIAT's budget (Table 2).

Future Relationships

The possibilities for growth in the Australia-CIAT relationship are high. For example, CIAT has a strong program in cassava and is trustee to the world's largest collection in cassava germplasm (more than 5,000 clones). The Center also has more than 20,000 accessions of tropical forage germplasm, many of which are adapted to acid soils, and highly relevant for sustainable farming systems for acid soils and the prevention of soil erosion.

The ACIAR carries out projects in Southeast Asia and the South Pacific on both cassava and tropical forages. The potential for germplasm exchange and collaborative research is therefore considerable.

Australia and CIAT share a common interest in tropical agriculture, particularly for developing countries in Southeast Asia and the Pacific. A strengthened partnership between Australia and CIAT is also essential for the continuing development of Australia's tropical north.

Table 1. Australian citizens and CIAT.

Name	Program	Status[a]	Discipline or role	Years
Staff:				
Ferguson, John	Trop. For.	SS	Agronomist	1974-->
Fisher, Myles	Trop. For	SS	Ecophysiologist	1985-->
Graham, Peter	Beef/Beans	SS	Soil microbiol.	1971-82
Grof, Bert	Trop. For.	SS/ Cons.	Agronomist	1971-->
Hutton, Mark	Trop. Past.	VS	Plant breeder	1978-82
Kerridge, Peter	Trop. For.	SS	Agronomist	1992-->
Laing, Douglas	Beans/Admin.	SS	Physiologist Dep. Dir. Gen.	1974-92
Lenné, Jill	Trop. Past.	SS	Pathologist	1979-88
Páez, Elizabeth	Commun. Unit	Sup.	Editor	1986-->
Scowcroft, William	Admin.	SS	Geneticist Dep. Dir. Gen.	1993-->
Stanton, Julie	Trop. Past.	PDF	Pathologist	1983-85
Short-term staff:				
Connor, David	Cassava	VS	Physiologist	1979-80
Davison, Bruce	Trop. Past.	VS	Economist	1982-83
Dillon, John	B. of Trustees		Board member	1981-86
Low, Helen	Seed Unit	Cons.	Seed specialist	1985
Reid, Robert	Trop. Past.	VS	Germplasm specialist	1981

a. SS = senior staff; PDF = post-doctoral fellow; Sup. = support staff; VS = visiting scientist; Cons. = consultant.

Table 2. Australia's financial contributions to the CG system[a] and CIAT (U.S. dollars).

Year	Contributions to:		Project
	CG system (in millions)	CIAT (in thousands)	
1973	0.01		
1974	1.02		
1975	1.22		
1976	1.75	125	
1977	1.79	143	
1978	2.58	182	
1979	2.65	179	
1980	2.96	209	
1981	3.30	288	
1982	3.77	362	
1983	4.06	404	
1984	4.00	505	
1985	4.18	457	
1986	4.52	440	
1987	2.92	—	
1988	3.13	—	
1989	3.70	87	*Stylosanthes* and anthracnose
1990	3.74	56	(with AIDAB)
1991	3.17	186	Cassava physiology (with AIDAB)
1992[b]	4.18	261	Forage seed project for SE Asia
1993[b]	3.96	396	(with CSIRO and AIDAB)

a. The CG system is the chain of 18 international agricultural research centres who are supported by the Consultative Group on International Agricultural Research (CGIAR).

b. Estimated contributions. For CIAT, contributions are to both core and special project funds.

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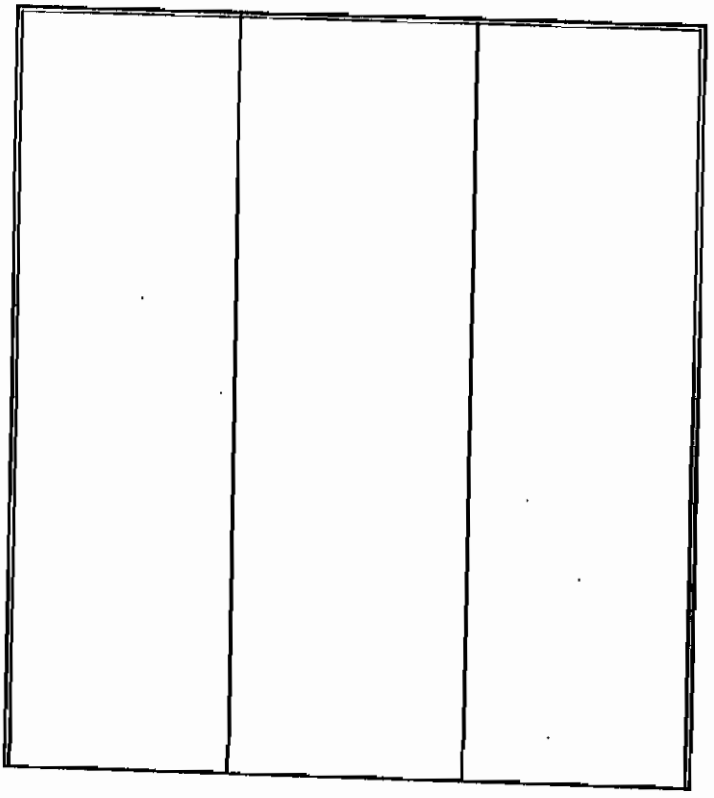

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