DEPARTMENT OF
PRIMARY INDUSTRY AND RESOURCES

NT FARMERS

Growing the Northern Territory
Opportunities for plant industries in the NT

Ver.3, September 2016




www.dpif.nt.gov.au

NORTHERN TERRITORY GOVERNMENT

The Northern Territory – The place to grow

The Northern Territory (NT) is a region of unique landscapes and rich possibilities. We offer security, stability and unparalleled proximity to the growing markets of Asia.

The NT is well renowned for the export of beef cattle and mango production. The Territory also supplies southern Australian cities with tropical fruit, and fresh vegetables and flowers. There are also stablished industries producing field crops and forestry products.

There is still significant potential for further development of plant industries. These opportunities draw on the NT's abundant land, and suitable water and soil resources.

Australian governments operate stringent biosecurity and environmental management programs that ensure the sustainability and integrity of our agricultural production systems.

There are a range of business models to capitalise on opportunities in plant industries. This includes a range of direct investment models, and partnerships which utilise the local knowledge and experience of farmers and indigenous enterprises.

The NT advantage

Track record of success

Proven agricultural systems and markets for fruit, vegetables, ornamentals and forestry products

Clean, green and safe

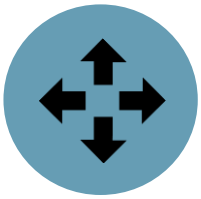
Stringent controls over agri-chemical use and management of biosecurity risk in our agri-food industries to assure a clean and green environment for plant production and safe food for consumers.

Close to key markets

Darwin is the closest Australian capital to Asia, with 4 billion people living within 8 hours flying time. The NT is well placed to capitalise on the continued increase in demand for quality food products from Asia and the Indian sub-continent.

Counter-seasonal

Fresh produce is harvested when other sources are out of season. This means fresh produce to extend produce programming in export markets and the potential to attract a premium price.

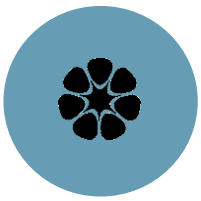


Freight and logistics

Established supply chains servicing southern Australian and international markets. Reliable infrastructure and experienced operators are able to deliver fresh products to meet market requirements.

Technical expertise

The NT government agencies have access to knowledge and expertise to maximise productivity in our unique growing conditions. This includes information on land and water resources, production systems; and supply and value chains.



Government facilitation

Supportive government policy to assist and inform your business planning.

Climate opportunities

Opportunities for plant industry development are shaped by our climate.

Regional differences in temperature, rainfall and humidity are important determinants for crop and land selection. Rainfall and rainfall variability need to be considered together with information on water availability for irrigation.

The NT experiences two distinct seasons—the wet (November to April) and the dry (May to October).

Key to climate charts	
Average monthly min and max temperatures (°C)	
Average monthly rainfall (mm)	
Average monthly variability for 80 % of long term record (mm)	
Average monthly evaporation (mm)	

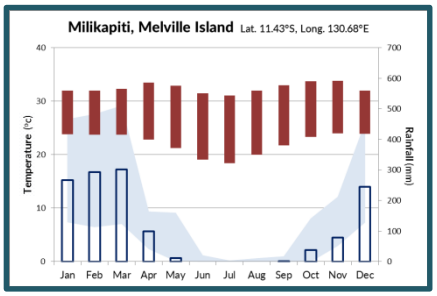
Equatorial
Hot wet season driven by monsoons.
Hot dry season.
Cyclone risk

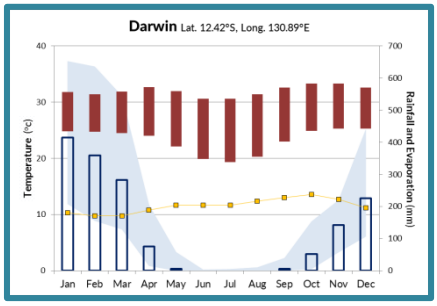
Tropical
Hot wet season with predictable rainfall.
Potential for cyclones.

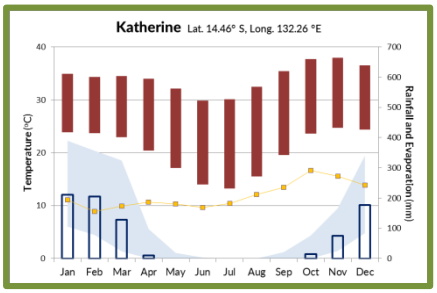
Semi-arid
Hot year round.
Variable rainfall.

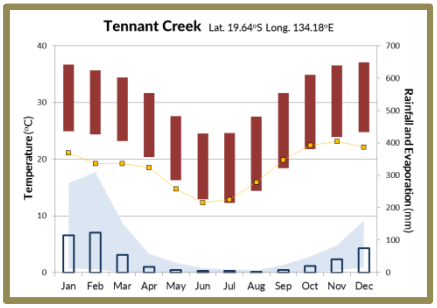
Semi-arid
Hot year round.
Variable rainfall.

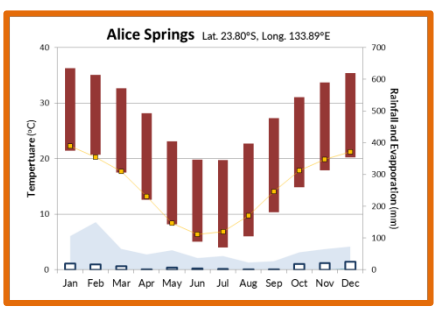
Arid
Hot days year round, with cold nights in the dry season.
Seasonal rainfall with higher variability.











Priority horticultural areas

Existing horticultural enterprises cluster around the population centres of Darwin, Katherine, Mataranka and Alice Springs where suitable soil and water is found as well as access to labour and transport. Hay production, field crops and forestry is found in the Doulgas-Daly, Katherine and Mataranka regions. This land is mostly freehold or leasehold and comprises only a small component of the NT land mass. There is also a large (30,000 ha) forestry plantation on Melville Island (part of the Tiwi Islands, north of Darwin).

The majority of land in the NT is pastoral lease or Aboriginal land. Pastoral leases are held as long term (25-50 year) and perpetual leases. Leases are available for sale, usually marketed through property agents. Up to 50 per cent of the lease area can be developed for non-pastoral use including agricultural production, subject to obtaining a non-pastoral land use permit and a land clearing permit.

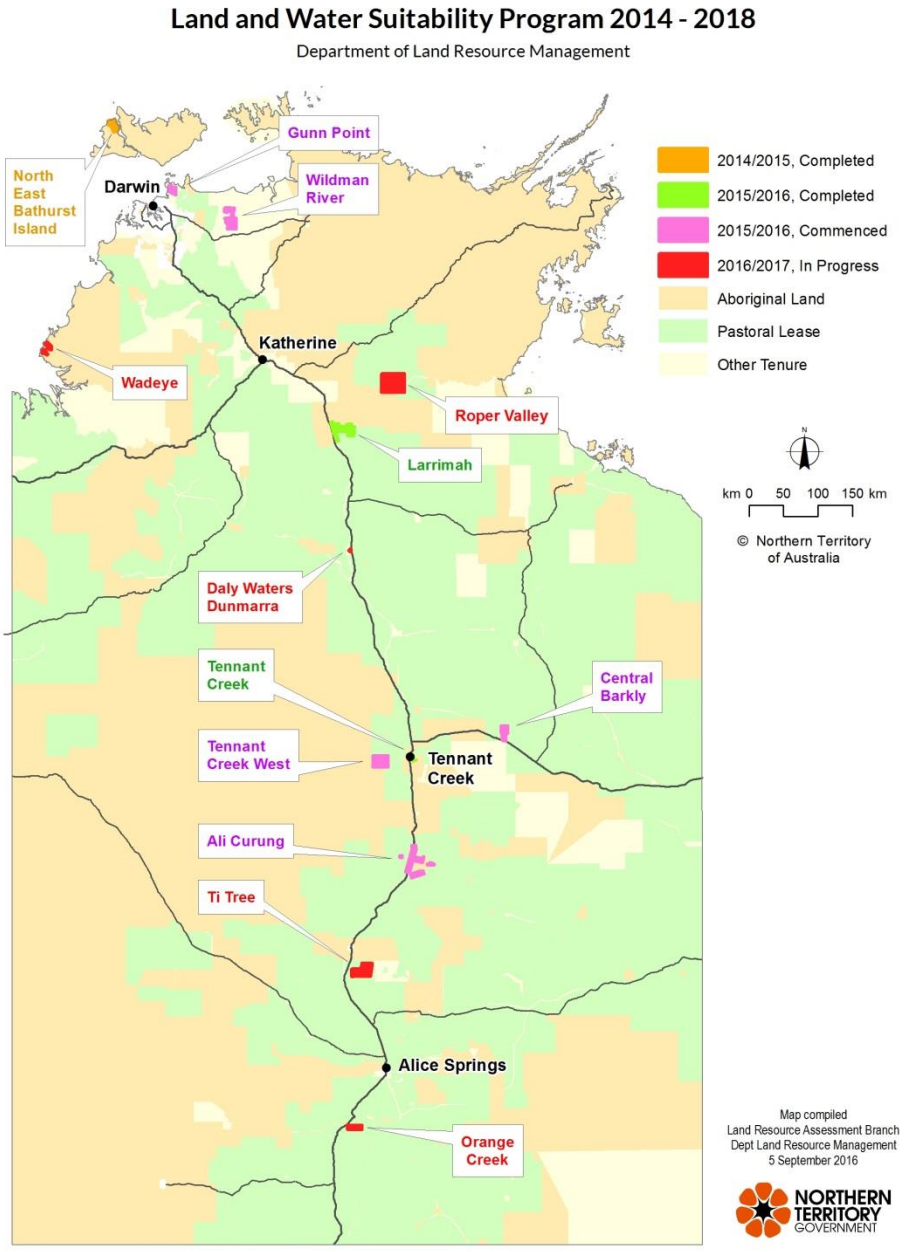
Aboriginal land is owned by traditional owners in land trusts or the community. Production on this land can be developed subject to agreement by the community.

Successful agricultural development will depend upon suitable soil and water.

The NT government is providing high quality land suitability and water resource information to underpin successful agricultural development. These are high priority areas for horticultural development. Land and water study information is available on line at landresources.nt.gov.au/rangelands/publications/land-soil-vegetation

Outside of priority areas, available soil and water information is available online at nrmaps.nt.gov.au

The Department of Environment and Natural Resources 2016 catalogue provides an inventory of natural resources digital data, printed maps and technical reports and available online at hdl.handle.net/10070/257849



Current plant industries

Crop type	Equatorial	Tropical	Semi- arid	Arid
Fruit and nuts		Banana Carambola (Star fruit) Citrus –Tahitian lime, pomelo Guava Durian Hogg plum Jackfruit Kakadu plum Malay apple Mango Melon – rock, water, honeydew Papaw, Papaya Passionfruit Pineapple Pitaya (Dragonfruit) Rambutan Soursop	Avocado Banana Citrus – lemon, grapefruit Mango Melon – honeydew, rock, water	Avocado Citrus – lemon, lime, mandarin, orange Dates Figs Grapes Mango Melons –honeydew, rock, water Olive Stone fruit (low chill)
Vegetables and herbs		Asian melon - bitter, long, hairy and winter Bamboo Bok choy Beans – snake Capsicum Chilli Choy sum Cucumbers Drumstick Egg plant Galangal Ginger Herbs - basil, betel leaf, coriander, curry leaves, peppercorn, mint, kaffir lime, Thai basil, Vietnamese mint Kang kong Lemon grass Luffa – smooth, angled Okra	Asparagus Onions – red, white Pumpkin Sweet corn Tomato	Asparagus Cabbage Lettuce Onions –red, spring, white Potato – sweet, white Pumpkin Zucchini

Current plant industries

Crop type	Equatorial	Tropical	Semi- arid	Arid
		Pak choy Potato - sweet Pumpkin Radish Shallots Squash Snake gourd Spring onions Taro Tomato Turmeric Zucchini and marrow		
Flowers and foliage		Euphorbia Ginger Heliconia Palms Turf	Cycads	
Forestry	*Acacia mangium*	African mahogany Sandalwood	African mahogany Sandalwood	
Broad-acre crops		Legumes and grass for hay Peanuts Opium poppies Rice Sorghum (for forage)	Chia Legumes and grass for hay Mung Beans Peanuts Opium poppies Sesame Sorghum (for forage)	Barley Chia Lucerne Oats Rhodes grass Sorghum (for forage)

Potential plant industries

Crop type	Equatorial	Tropical	Semi- arid	Arid
Fruit and nuts	Coconut Coffee Mango Pineapple Vanilla	Abiu Coconut Fig Longan Longkong Tree nuts – cashew Vanilla	Avocado Citrus – grapefruit, tangelo Fig Olives	Avocado Berry – blackberry, mulberry, raspberry Carob Citrus – grapefruit, lemon, orange, tangelo Fig Jujube (Chinese date) Kiwifruit Loquat Moringa Olive Passionfruit Persimmon Pomefruit Pomegranate Stone fruit Tree nuts – almonds, macadamia, pecan, pistachio
Vegetables and herbs	Herbs and spices – ginger, peppercorn, Thai basil, Vietnamese mint Potato – sweet Shallots Squash Zucchini and marrow		Beetroot Cabbage Capsicum Choko Lettuce Mushrooms Peas – green, snow, sugarsnap Salad leaves – baby spinach, lettuce, rocket Shallots Spring onions Sweet corn Sweet potato Squash Zucchini and marrow	Aloe vera Artichoke Beans Carrot Capsicum Celery Chilli Cucumber Fennel Garlic Jicama (Yambean) Kale Kohlrabi Leek Lettuce Rhubarb Passionfruit Peas – green, snow, sugarsnap Salad leaves – baby spinach, lettuce, rocket Shallots

Potential plant industries

Crop type	Equatorial	Tropical	Semi- arid	Arid
				Spinach Spring onion Sprouts – alfalfa, mung bean, lentil Sweet corn Tomato Zucchini and marrow
Flowers and foliage		Ornamental plants	Aloe vera Cactus	Native species e.g. Geraldton wax, Kangaroo paw, Sturt's desert pea
Forestry	Eucalyptus hybrids Native hardwood (selective harvest) Pine Teak	*Acacia mangium* American mahoganies Eucalyptus hybrids Native hardwood (selective harvest) Teak	American mahoganies Eucalyptus hybrids Native hardwood (selective harvest)	Eucalyptus hybrids Native hardwood (selective harvest)
Broad acre	Legumes and grass for hay	Cassava Chia Maize Quinoa Seasame Soybean	Cassava Chia Chickpea Cotton Industrial hemp Maize Mustard seed Soybean Quinoa	Cotton Chia Chick pea Legumes for hay – cowpea, snowpea, safflower Lentil Maize Millet Opium poppies Soybean Sunflower Quinoa

Export requirements for a selection of plants

The table below sets out requirements that exporters must meet for products to be accepted for import into important south-east Asian markets.

Where import requirements have not been defined access for export is unlikely. Information regarding an import permit and specific quarantine requirements should by sought from the relevant quarantine authority for the importing country.

All information was accessed from the Department of Agriculture and Water Resources (DAWR) Manual of Importing Country Requirements, available online at www.micor.agriculture.gov.au.

● Requirements defined
⊙ Requirements for import partially defined
○ Requirements not defined

	IMPORTING COUNTRY (current at September 2016)												
	Bangladesh	China	Hong Kong	India	Indonesia	Japan	Korea (South)	Malaysia	Pakistan	Philippines	Singapore	Thailand	Vietnam
FRUIT AND NUTS													
Avocado *Persea americana*	○	○	●	○	● C, I, F or VH	○	○	○	○	○	●	● C	⊗
Citrus – grapefruit, lemon, lime, mandarin, orange, pomelo, tangelo, tangerine, tangor	○	● C, R	●	● C or F	● C, I, or F	● 3 C	● 9 C, R, +	●	○	● C, +	●	● 12 C, F	● 14 C, I, or
Date – fresh	●	○	●	⊗	○	⊗	⊗	●	○	●	●	⊗	⊗
Grape *Vitis* spp.	○	● C, R	●	● C or F	● C, I, or VH	● 4 C	● C, R, +	○	● U	● 11 C, +	●	● C, R	● 11 C, I
Lychee *Litchi chinensis*	○	○	●	○	● C, I, F or VH	○	○	○	○	○	●	○	○
Mango *Mangifera indica*	● M	○	●	○	● C, I, F or VH	● 5 VH	● VH	● 10 I	○	○	●	○	⊗
Melons – honeydew, rock, water	○	○	●	○	● 2 C, I, F or VH	● 6	○	●	○	○	●	○	⊗
Peanut	○	○	●	○	●	○	●	○	●	○		○	○
Rambutan *Nephelium lappaceum*	○	○	●	○	○	●	○	○	○	○	●	○	○
VEGETABLES AND HERBS													
Asparagus *Asparagus* spp.	○	●	○	○	○	● 7	●	●	○	●	●	●	○
Chives, Garlic, Leeks, Onions, Shallots *Allium* spp.	○	○	○	● F	● 1	○	● 8	●	○	●	●	●	○
Potato for consumption *Solanum tuberosum*	○	○	○	○	●	⊗	●	●	○	●	●	⊗ 13	○
Seed potato for sowing *S. tuberosum*	● F	●	○	○	● +	○	● +	○	○	○	○	○	●
Zucchini, Scallopini, Pumpkins *Cucurbita* spp.	○	○	○	○	● C, I, F or VH	⊙ 8	○	○	○	○	●	○	○
FORESTRY													
African mahogany timber	○	○	● EL	● EL	● EL	● EL	● EL	● EL	○	● EL	○	● EL	● EL

● Requirements defined

⊙ Requirements for import partially defined

○ Requirements not defined

	IMPORTING COUNTRY (current at September 2016)												
	Bangladesh	China	Hong Kong	India	Indonesia	Japan	Korea (South)	Malaysia	Pakistan	Philippines	Singapore	Thailand	Vietnam
Sandalwood timber and products *Santalum* spp.	○	●	●	● EL	○	⊙	●	● EL, F	○	● EL	○	●	●
Wood chips *Acacia mangium*	○	○	● EL	● EL	● EL	● EL	● EL	● EL	○	● EL	○	● EL	● EL
BROAD ACRE CROPS													
Grain/seeds for human consumption e.g. canola, sorghum	● F +	● P	●	⊙	○	⊙	● S	⊙	⊙ +, F	⊙	⊙	⊙	⊙
Processed plant product for stock feed e.g. straw, hay, pellets	●	⊙	●	⊙ HC	⊙	⊙	●	●	○	⊙	● +	●	⊙
Soy bean *Glycine max*	○	○	○	○	○	○	● +	●	○	○	⊙	○	○

Explanatory Notes Current at 01 June 2016.	
●	Consignments are usually required to be free from pests, soil, weed seeds and extraneous material.
⊙	Requirements for import have been defined for particular commodities. For example, wheat bran pellets, rather than all processed plant product.
○	Specific quarantine requirements of the importing country need to be sourced from the relevant quarantine authority.
⊗	Prohibited import.
+	Additional declaration/endorsements may be required for particular pests and diseases.
C	Cold treatment required for the treatment of fruit flies.
EL	An export licence for unprocessed wood issued by DAWR may be required, dependent on where the wood has been sourced.
F	Treatment with an approved fungicide/fumigant may be required for one or more pests/diseases. For example, methyl bromide for treatment of fruit fly with the density, temperature and time period parameters specified.
HC	A Health Certificate issued by India's Grain and Seed Exports Program is required for export.
I	Irradiation required for fruit fly treatment. A minimum irradiation level may be specified e.g. 150 or 300 gray.
M	All packing material needs to be sterile.
P	Delivery of some commodities need to be shipped through an approved port.
R	Growers, packhouses and/or treatment facilities must be specifically registered with DAWR or jointly approved by the appropriate agency in the importing country.
S	Screening required for some seed/grain through prescribed mesh size e.g. maximum 8 mm.
U	Consignments to be treated by unspecified process for bacterial diseases, viral diseases and mites (including eggs) with appropriate and approved chemicals at recommended manufacturers requirements.
VH	Vapour heat treatment required for fruit fly treatment.
1	Garlic and onion requires irradiation or for all bulbs in the consignment to be cut free from green leaves and to have fully dried roots.
2	Refers to water melons (*Citrullus* sp.) only.
3	Only sweet orange varieties Valencia and Washington Navel, lemons, and easy peel (mandarin) varieties of Imperial, Murcot, Ellendale and Minneola are approved for export to Japan.
4	Only Crimson Seedless, Thompson Seedless and Red Globe grape varieties are approved for export to Japan.
5	Only Kent, Keitt, Palmer, R2E2 and Kensington mango varieties are approved for export to Japan.
6	Honeydew melons and rockmelons only.
7	There are defined tolerances for infestation by Heliothis eggs and/or larvae.
8	Applies only to *C. maxima*, *C. moschata* and *C. pepo* pumpkin.
9	Only applies to all varieties of sweet orange *(Citrus sinensis)*; *C. limon* and *C. x meyeri*; and Onion (*Allium cepa*).
10	Irradiation treatment may only be conducted at Steritech Pty Ltd in Narangba, Queensland.
11	Only applies to wine grapes (*Vitis vinifera*).
12	Only applies to orange (*C. sinensis*), mandarin (*C. reticulata*) and lemon (*C. limon*).
13	Potatoes for consumption are prohibited. Only potatoes for processing are eligible for export.
14	Oranges and mandarins are eligible for export. Export of lemon, grapefruit, lime, and tangelo is currently suspended.

We are here to help

The **NT Government** is here to support industry growth through addressing industry priorities as well as removing impediments to industry expansion.

We can assist with facilitation of agribusiness projects to support your business planning. We can also connect you with a range of experienced professionals to assist with land sales, land tenure clearances, agronomics and environmental approvals.

The **NT Farmers Association** (NTFA) is the peak industry body for all plant industries in the Northern Territory. NTFA is available to discuss issues relating to the local horticulture, agriculture and forestry industries and opportunities for development of the sector in the NT. Visit their website at www.ntfarmers.org.au.

Visit our *Invest NT* website for information on current agribusiness investment opportunities and a guide to investing in the NT.
www.investnt.com.au

Your next steps

Please note that this information serves as a guide only. It is based on historic data, research and expert opinion.

Detailed technical investigation of soil and water resources, and due diligence assessment would be required prior to investment in agribusiness development.

MICoR should also been consulted for detailed information regarding export of plant materials.

The Bureau of Meteorology has reported a predicted change in long term climate patterns. This will need to be considered in the assessment of suitable plant production systems.

Please contact us

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