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Cotton (*Gossypium spp.*) belongs to the family Malvaceae, which originated in the hot arid regions of the tropics and sub-tropics of Africa, the Middle East, Asia, Australia, the Americas, Hawaii and certain islands in the South Pacific. Although now modified and adapted to grow in a broad range of environments, cotton does best in areas with a long, hot season.

It has been used as a textile for many thousands of years. Cotton fabrics dating back to 3000BC were found in the Indus Valley in Pakistan and cotton specimens dating from 2500BC were found in Peru.

The plant was introduced into Australia with the First Fleet in 1788 and was first planted in the Sydney area, with disappointing results due to the unfavourable climate. Cotton was farmed commercially for the first time at Moreton Bay in 1840. Early production was confined almost entirely to Queensland.

The modern cotton industry as we know it, commenced in the early 1960s. From modest beginnings in NSW and Queensland, Australia's cotton industry has grown rapidly to become the nation's fourth largest rural

export earner (behind wool, meat and wheat). Close to 95% of Australia's annual cotton crop is exported as fibre, netting the country about \$1.5 Billion each year in export sales.

Today cotton is grown from Hillston in the south to Emerald in the north by approximately 1500 cotton growers. About 70% of the Australian crop is produced in northern and western NSW with the remainder in southern and central Queensland.

Experimental areas of cotton also exist in a number of locations in northern Australia.

Most is grown under irrigation with dryland plantings fluctuating yearly according to seasonal conditions. In recent good seasons dryland has accounted for up to 20% of the area planted to cotton but less than 10% of the crop production.

A nucleus of experienced growers and consultants has demonstrated that dryland cotton can be profitably produced, providing growers adhere to a fairly strict set of management guidelines. The objective must always be to keep costs to a minimum.

Summary of considerations for growing dryland cotton

- Reliable summer cropping areas
- Paddocks with over 1 metre of subsoil moisture, free of summer weeds, without sticks, stones and too many trees, and away from houses
- Do a cash flow budget
- Finance to grow the crop (costs are typically \$600 to \$700/ha)
- Services of a reliable and experienced dryland cotton consultant/agronomist
- Gear-up with machinery, either internally, from contractors or share with neighbours – particularly consider:
 - 3 point linkage tractor
 - planter
 - spray rig
 - harvesting, picking gear
- Discuss growing the crop with experienced growers and consultants and agronomists
- Contact your chemical supplier to budget your chemical needs.

Dryland cotton is an expensive crop to grow and profit margins can easily be eroded unless a tight rein is kept on expenses. Growers should take advantage of every cost saving measure available, without jeopardising crop viability.

The very attractive yields, prices and profits dryland cotton farmers have obtained in the past provide no guarantee for the future. New farmers should approach the crop with caution.

Dryland cotton does not hold the answer to reversing financial problems overnight. It is not a crop for the faint hearted, inexperienced or financially troubled farmer, or for those in climatically unsuitable areas.

Growers considering dryland cotton farming should first have the capital resources required to grow the crop. A commitment by the farmer to a high level of managerial expertise is also necessary. The cotton industry's rapid adoption of advanced production technology bears witness to the high degree of managerial skills required. Successful summer row crop farmers should find the transition to cotton easier.

These notes address in detail the many basic needs for producing a successful crop including:

- budgeting
- machinery
- fallow management
- varieties
- sowing
- nutrition
- herbicide program
- insect management program
- defoliation
- picking
- contractors
- marketing

Figure 1 (opposite) shows a seasonal calendar for cotton based on a crop water use chart from NSW Agriculture.

Other cotton references include:

- New Crop Management Notes 2002/2004 Summer Edition (CD-ROM)
- WeedPAK
- MachinePAK
- SprayPAK
- SoilPAK
- EntoPAK
- NutriPAK
- The Cotton Pest Management Guide, NSW Agriculture, Agdex 151/680
- Cotton Pest & Beneficial Guide
- CottonLOGIC
- Temperature Requirements for Cotton
- Soil and Nutrient Management of Irrigated Cotton, AgFact
- Weed & Disease Management of Cotton, AgFact
- Improving Soil Structure with Gypsum, AgFact
- Update of regulations on the use of Endosulfan
- Insect Pest Management Guidelines
- Insect Pest Management Short Course
- Integrated Disease Management Guidelines

If you are a new grower or have changed address details including email, contact the Australian Cotton CRC Technology Resource Centre (David Larsen) on 02 6799 1534, or David.Larsen@agric.nsw.gov.au, so you can be included in industry wide mailouts.

Access to a lot of information can be obtained through the publications section of the Cotton CRC website at: www.cotton.crc.org.au

Figure 1. Cotton Seasonal Calendar (Water Use Chart courtesy NSW Department of Agriculture)



