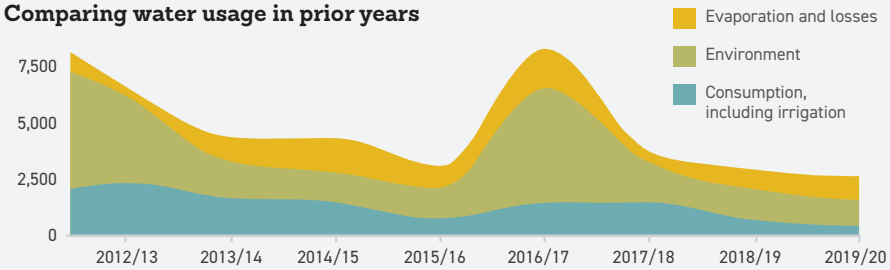
PLANET
WATER
| less drops per crop

COTTON AUSTRALIA

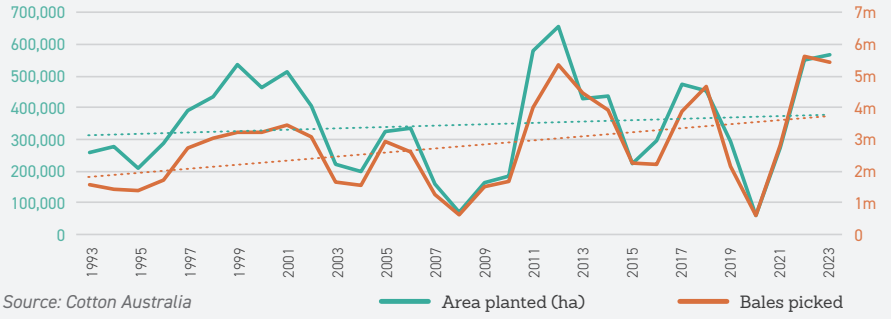
CRDC

Comparing water usage in prior years



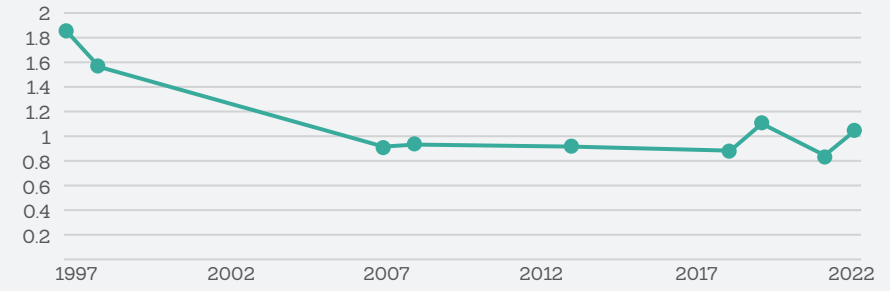
Source: Adapted from Water NSW Water Insights

Australian cotton area and production: 1993 - 2023



Source: Cotton Australia

ML/bale Sustainable Water Use Index (SWUI) (irrigated)



Source: Adapted from NSW DPI Research. This index is determined using all available water to the crop except soil water. It is the inverse of what is known as the partial GPWUI (Gross Production Water Use Index).

Governments set sustainable water use limits

In Australia, water is highly regulated to ensure sustainable withdrawals of freshwater. Governments set sustainable water use limits, where basic needs of the environment and humans must be met before any water is allocated for irrigation. Because the volume of water in rivers varies each year, the amount of water available for irrigation also varies each year.

Cotton is grown when water is available to farmers

Each year, farmers choose what crop is the best to grow with the water available to them; water is allocated to farmers, not to crops. If water in a river system is scarce, water available for irrigation is also scarce, and farmers factor that into their yearly decisions about which crop to plant and how much to grow. As cotton is a crop that is planted each year, it is suited to a variable climate: when there's limited water, growers can adjust the area of cotton they plant. About 70 per cent of Australian cotton by area is irrigated.

Cotton is using less water per bale

Within the regulatory framework that aims to deliver sustainable water use from healthy river systems, the cotton industry's goal is to increase the productivity of available water. Compared to 1997, it takes about 50% less water to grow a bale of cotton in seasons that don't experience climatic extremes, and about 40% less water in very dry (like 2019) and very wet (like 2022) seasons. Drought years reduce yields due to increased plant stress and have higher temperatures with more evaporation. Wet years may cause floods or heavy rainfall at the wrong time can negatively impact yield.

OUR GOAL

To increase the efficiency of water used for cotton irrigation, within sustainable river and ground water system and plant physiology limits.

SDG ALIGNMENT

6 CLEAN WATER AND SANITATION

SDG 6.4: Substantially increase water use efficiency and ensure sustainable withdrawals of freshwater.

PATHWAY

Continued adoption of practices to:

1. reduce losses in storage and transmission
2. improve efficiency in application.

KEY FACTS

Compared to 1997: **50%** **less water** to grow a bale of cotton in seasons without climate extremes

40% **less water** to grow a bale of cotton in seasons with climate extremes

The rate of water use efficiency gains has slowed as growers become more efficient.