



# CANNABIS

## KEY POINTS

- While the number of cannabis detections at the Australian border remained stable in 2007–08, the weight of detections increased by 17 per cent.
- Cannabis seeds continued to account for the greatest proportion of cannabis border detections. However, the largest single detection was of cannabis resin.
- Cannabis accounted for the greatest proportion of national illicit drug arrests and seizures.
- Although uncommon, three clandestine laboratories designed for extracting cannabis oil were detected in 2007–08.

## MAIN FORMS

Cannabis is derived from the *Cannabis sativa* plant. Grown outdoors in a variety of climates, the plant is commonly cultivated indoors using hydroponic technology. The plant is the source of a number of drug products that can be grouped into two types, hemp and marijuana. Hemp is low in psychoactive components, fibrous and primarily used to produce paper, clothes and skin-care products. Marijuana, which is high in psychoactive components, is commonly referred to as cannabis. It can be prepared in a number of forms and administered by a variety of methods, as outlined in Table 7.

TABLE 7: MAIN FORMS OF CANNABIS

Form	Description	Properties	Method of administration
Herbal cannabis	The leaves and flowering heads	Low levels of THC	Smoked as a rolled cigarette or inhaled through a water pipe or 'bong'
Cannabis resin (hashish)	Made from the resinous material of the cannabis plant, dried and compressed into balls, blocks or sheets;  colour ranges from light brown to black	Medium levels of THC	Crumbled and smoked in a pipe or bong, rolled into a cigarette with cannabis leaf or tobacco, or cooked with food and eaten, most notably as 'hash cookies'
Cannabis oil	Viscous oil extracted using a solvent such as acetone or methanol;  colour ranges from amber to dark brown	High levels of THC	Small amounts applied to cannabis or tobacco cigarettes; can also be heated and the vapour inhaled

Cannabis is a depressant which slows activity of the central nervous system. The effects of cannabis can vary from person to person. Physical effects of use include impaired coordination and balance, increased appetite, drowsiness, red eyes and a rapid heartbeat. Psychological effects of use include impaired concentration and short-term memory and a distorted sense of time and space. Victorian research indicates that drivers who use cannabis are at a similar level of risk of having a car accident as drivers with a blood alcohol concentration above 0.05 (VicRoads, 2008).

Cannabis has been identified as affecting the development of mental health disorders. There is evidence that cannabis use can contribute to the onset of drug-induced psychosis and mental health disorders such as schizophrenia (Australian Drug Foundation, 2006; Hall and Degenhardt, 2008). Research also indicates that early, frequent and long-term cannabis use increases the likelihood of depression in adulthood (McLaren et al., 2008). Research into chronic use of cannabis has been found to produce adverse effects within the central nervous system. These include deficits in learning and attention tasks and decreased brain volume (Angelucci et al., 2008).

The *Cannabis sativa* plant contains approximately 500 compounds, including 70 which provide a psychoactive effect (McLaren et al., 2008a). The main compound responsible for the psychoactive, or mood altering effects, is the cannabinoid called delta-9-tetrahydrocannabinol (THC). The highest concentration of THC is generally found in the flowers or 'heads' of the plant, with smaller quantities found in the leaves and stems. The potency of cannabis can vary depending on the strain or variety of the plant, and the way it is grown, prepared and stored.

In an attempt to obtain higher levels of THC, varieties of the *Cannabis sativa* plant have been cultivated through plant selection (including hybrid varieties), cloning and indoor-cultivation. The technique of cultivating only female cannabis plants— an ancient practice referred to as *sinsemilla*—has also been identified. This technique involves isolating female plants to ensure they are not fertilised by the pollen of the male plant. According to the *World Drug Report 2006*, the most potent cannabis is produced using the *sinsemilla* technique (UNODC, 2007).

Numerous international studies have examined cannabis potency. Overall, there have been mixed findings. In the last decade, the UK, the US, Italy and the Netherlands have reported increases in cannabis potency. A reduction in cannabis potency was reported in New Zealand. No significant changes in potency were reported by Austria and Germany. It is difficult to draw conclusions or make comparisons across countries based on these studies as different research and analytical methods have been used (McLaren et al., 2008a).



## INTERNATIONAL TRENDS

In terms of cultivation, production and number of consumers, cannabis remains the world's dominant illicit drug. Cannabis herb production was estimated at approximately 41 400 tonnes in 2006, a minor reduction from 42 000 tonnes in 2005 and 45 000 tonnes in 2004 (UNODC, 2008).

Although cannabis use has declined in North America, West and Central Europe and Oceania, its use continues to increase in Central and South America, Africa and Asia. According to the United Nations Office on Drugs and Crime (UNODC), it is likely that there is a greater level of organisation involved in the cultivation and trafficking of cannabis than is currently known (UNODC, 2008).

Although Moroccan cannabis cultivation continues to decline, Morocco remains the world's largest producer of cannabis resin. Morocco is the source country for approximately 20 per cent of global cannabis resin seizures, with Afghanistan accounting for 10 per cent. However, this is likely to change as cannabis cultivation in Afghanistan is steadily approaching that of Morocco. In 2007, the area under cannabis cultivation in Afghanistan increased to approximately 70 000 hectares and is equivalent to over one-third of the area under opium poppy cultivation (UNODC, 2008). Cannabis cultivation in Afghanistan is becoming increasingly lucrative, with prices rising in the last two years to US\$56 per kilogram in July 2008. Although the quantity of cannabis cultivation in Afghanistan for 2008 is unknown, UNODC notes that the less labour intensive nature of cannabis cultivation coupled with rising farm-gate prices may encourage farmers to switch to cannabis cultivation (UNODC, 2008a). The record seizure of 236.8 tonnes of cannabis resin in Afghanistan in June 2008 highlights the considerable cultivation of cannabis in this country.

In the latter half of 2007, Egypt, Ireland, Kyrgyzstan, Malawi, Mali, Portugal, Spain and Sri Lanka each seized in excess of one tonne of cannabis herb or resin (UNODC, 2008b). However, all seizures during this period were dwarfed by the record seizure of 236.8 tonnes of cannabis resin in Afghanistan.

## DOMESTIC TRENDS

### AUSTRALIAN BORDER SITUATION

While widely available overseas, the importation of cannabis into Australia generally remains financially unattractive due to relatively cheap and plentiful supplies from domestic cultivation and the increased risk of detection at the border.

The largest single cannabis detection at the Australian border in 2007–08 was not of cannabis leaf, which is easily sourced domestically, but cannabis resin. Cannabis resin is not commonly used in Australia but is common in parts of Africa, Asia and Europe. In October 2007, 25.5 kilograms of cannabis resin was seized from an importation of charcoal from Thailand. The shipment was destined for an import company in New South Wales previously suspected of illicit drug trafficking.

## SIGNIFICANT BORDER DETECTIONS

Detections of cannabis at the Australian border in 2007–08 totalled 53.4 kilograms, nearly eight kilograms more than 2006–07. Of the 651 detections, only 21 were above 100 grams, with seven above one kilogram. The majority of these detections were from the Netherlands, while Thailand accounted for the greatest total weight (see Figure 18).

Four-hundred and sixty-six cannabis detections, representing nearly three-quarters of the total, involved seeds. Occasionally detected in 100 gram, 250 gram or 500 gram packets, the majority were small weight detections intended for home cultivation. Among the seven detections over one kilogram, five involved attempted imports of hemp protein nutritional supplements and shampoos. While hemp protein falls within the import prohibitions on all parts of the cannabis plant, this substance is not a commonly used drug.

## IMPORTATION METHODS

In 2007–08, cannabis was detected in postal articles, air cargo parcels, luggage of air passengers, concealed in food, t-shirts, and CD and DVD covers.

The majority of cannabis detections are considered personal use quantities, sent to Australia by mail or detected 'on' or 'in' air passengers. Cannabis is difficult to conceal, with its strong odour making consignments vulnerable to detection.

**FIGURE 18: COUNTRY OF EMBARKATION FOR CANNABIS IMPORTATIONS OF MORE THAN 100 GRAMS, DETECTED AT THE AUSTRALIAN BORDER, 2007–08 (SOURCE: AUSTRALIAN CUSTOMS AND BORDER PROTECTION SERVICE)**





## DOMESTIC MARKET INDICATORS

Despite a continued decrease in use, cannabis remains the most commonly used illicit drug in Australia. According to the *2007 National Drug Strategy Household Survey (NDSHS)*, the proportion of the general population reporting cannabis use in the previous 12 months (recent use) decreased significantly from 11.3 per cent in 2004 to 9.1 per cent in 2007. Recent cannabis use has continued to decline since 1998 and is at its lowest level since 1993 (AIHW, 2008).

An estimated 5.8 million Australians—which equates to approximately one-third of the population—have used cannabis at least once in their lifetime. In comparison, ecstasy—the second highest used illicit drug in Australia—was reported by 1.5 million people. Cannabis use has remained relatively stable over the preceding 15 years (AIHW, 2008).

Despite a slight decrease from 2006, cannabis continues to be the most commonly detected drug amongst police detainees. In 2007, nearly half of all detainees returned positive urinalysis tests for cannabis use.<sup>1</sup> Self-reporting among this group identifies hydroponically grown heads as both the preferred and actual form of cannabis used by the majority of detainees (Adams et al., 2008).

In 2006–07, drug treatment services reveal that after alcohol, cannabis was the principal drug for which treatment was provided. Prevalence rates for cannabis use continue to be highest among adolescents and young adults. For clients aged 10–19 years, cannabis (47 per cent) preceded alcohol (29 per cent) as the most common drug for which treatment was provided (AIHW, 2008a).

The majority of cannabis in Australia is domestically produced, with outdoor and hydroponic cultivation remaining common in all states and territories. The most commonly detected method of cultivation remains hydroponics or other enhanced indoor-cultivation methods. These cultivation methods are frequently detected within residential premises and can vary greatly in their level of sophistication. Indoor cultivation allows for the plant to be grown throughout the year, resulting in a higher yield of ‘head’ or ‘buds’ in a shorter period of time.

In 2007–08, there were three detections of clandestine laboratories designed to extract cannabis oil. Two were detected in the Australian Capital Territory and one in South Australia. Although these laboratories have been detected previously, detections are not common (see Table 3 in *ATS* chapter).

### PRICE

The price for a ‘deal’ (approximately one gram) of cannabis in Australia has remained relatively stable in most jurisdictions. In 2007–08, the price of a gram of cannabis head ranged between \$20 and \$35. However, prices in remote locations can be significantly higher. In remote communities in the Northern Territory, prices for a deal regularly reach \$50 to \$100 per gram.

<sup>1</sup> This may be a consequence of the ability of urine testing to detect cannabis for up to 30 days after use, compared with less than four days for a number of other tested drugs.

## AVAILABILITY

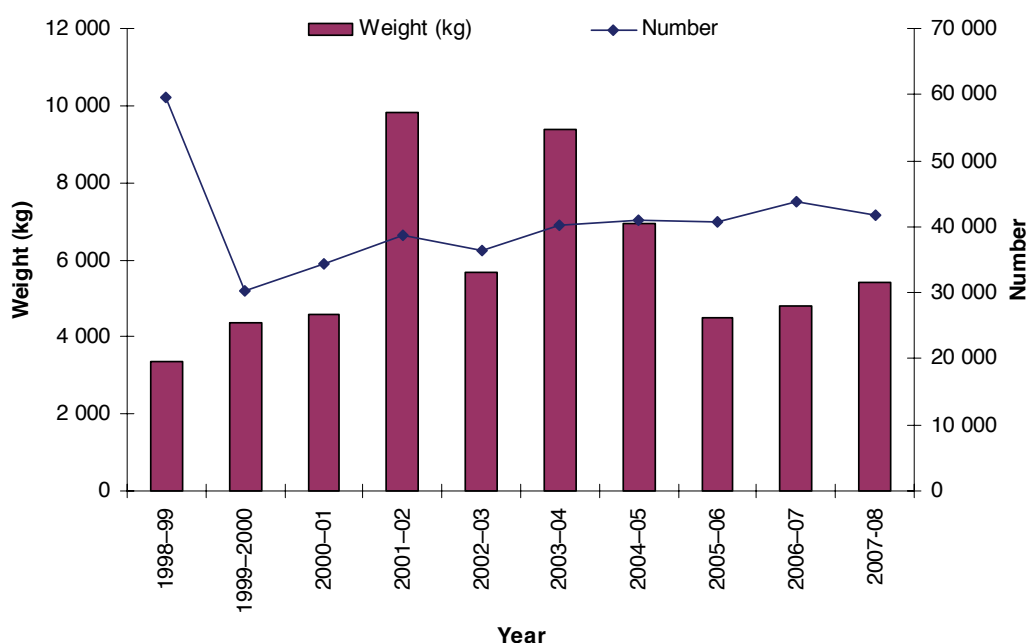
According to the 2007 NDSHS, approximately one in six Australians were offered or had the opportunity to use cannabis in 2007. This represents a reduction from the one in five Australians reported in the 2004 survey (AIHW, 2008).

According to research on regular ecstasy users and regular injecting drug users in 2007, cannabis remains readily available throughout Australia. Indoor-cultivated cannabis was described by over 75 per cent of respondents from both studies as either 'easy' or 'very easy' to obtain. Outdoor-cultivated cannabis was not as readily available and was reported by over half the respondents in both studies as 'easy' or 'very easy' to obtain. The availability of cannabis appears to have declined slightly from 2006 to 2007 (Roxburgh and Burns, 2008).

## SEIZURES AND ARRESTS

With the exception of 2006–07, cannabis is historically the predominant drug seized in Australia.<sup>2</sup> The 5409 kilograms seized nationally in 2007–08 accounted for 64 per cent of illicit drugs seized in Australia. Similarly, the 41 660 cannabis seizures in this reporting period represent 68 per cent of all seizures. Since 1999–2000, the weight of national cannabis seizures has fluctuated considerably, while seizure numbers have gradually increased (see Figure 19). In 2007–08 the weight of national cannabis seizures increased by 13 per cent, while seizure numbers decreased marginally (see Table 8).

FIGURE 19: NATIONAL CANNABIS SEIZURES, BY WEIGHT AND NUMBER, 1998–99 TO 2007–08



<sup>2</sup> In 2006–07, national ATS seizures accounted for 46 per cent of the total seizure weight of all illicit drugs, compared with cannabis with 41 per cent. This is largely due to the single record seizure of 4,422 kilograms of MDMA in 2006–07.



**TABLE 8: NUMBER, WEIGHT AND PERCENTAGE CHANGE OF NATIONAL CANNABIS SEIZURES, 2006–07 AND 2007–08**

State/territory <sup>a</sup>	Number			Weight (grams)		
	2006–07	2007–08	% change	2006–07	2007–08	% change
NSW	10 348r	11 878	14.8	1 064 913r	1 496 477	40.5
Vic	3 036r	2 977	-1.9	1 572 051r	1 472 036	-6.4
Qld	16 660r	14 051	-15.7	653 688r	898 119	37.4
SA	431	384	-10.9	694 183	617 443	-11.1
WA	8 987r	8 496	-5.5	348 528r	302 696	-13.2
Tas	2 897	2 120	-26.8	188 780	238 387	26.3
NT	988	1 077	9.0	55 202	83 179	50.7
ACT	497r	677	36.2	204 555r	300 917	47.1
<b>Total</b>	<b>43 844r</b>	<b>41 660</b>	<b>-5.0</b>	<b>4 781 900r</b>	<b>5 409 254</b>	<b>13.1</b>

a. Includes seizures by state/territory police and AFP for which a valid seizure weight was recorded.

Cannabis continues to represent the greatest proportion of drug arrests in Australia. In 2007–08, 67 per cent of all drug arrests were for cannabis. The number of national cannabis arrests has remained relatively stable over the past decade (see Figure 20). There were 52 465 cannabis arrests in 2007–08, representing a seven per cent decrease from the 56 862 reported in 2006–07 (see Tables 9 and 10). ‘Consumer’ arrests accounted for 86 per cent of cannabis arrests during this period. The majority of cannabis arrests continue to occur in Queensland.

**FIGURE 20: NUMBER OF NATIONAL CANNABIS ARRESTS, 1998–99 TO 2007–08**

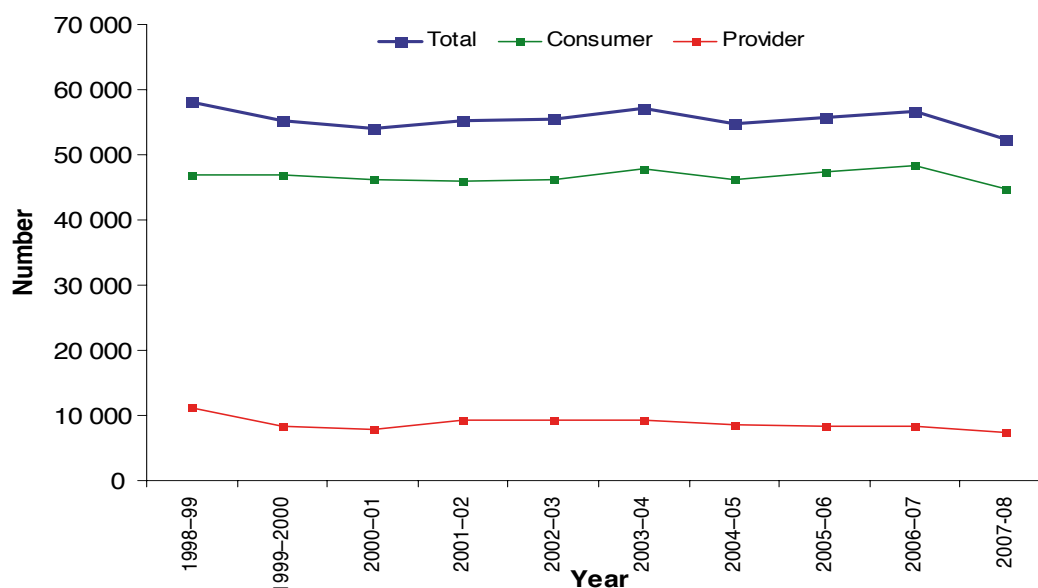


TABLE 9: NUMBER AND PERCENTAGE CHANGE OF NATIONAL CANNABIS ARRESTS, 2006–07 AND 2007–08

State/territory <sup>a</sup>	2006–07	2007–08	% change
NSW	9 906	10 699	8.0
Vic	6 836r	6 681	-2.3
Qld	22 699	17 130	-24.5
SA	1 403r	1 760	25.4
SA (CENS) <sup>b</sup>	5 393	6 157	14.2
WA	5 774r	5 371	-7.0
WA (CINs) <sup>c</sup>	1 878	1 464	-22.0
Tas	1 733	1 954	12.8
NT	588	552	-6.1
NT (DINs) <sup>d</sup>	339	378	11.5
ACT	224	227	1.3
ACT (SCONS) <sup>e</sup>	89	92	3.4
<b>Total</b>	<b>56 862r</b>	<b>52 465</b>	<b>-7.7</b>

a. Includes arrests by state/territory police and AFP.

b. Cannabis Expiation Notices.

c. Cannabis Infringement Notices.

d. Drug Infringement Notices.

e. Simple Cannabis Offence Notices.

TABLE 10: NUMBER OF NATIONAL CANNABIS ARRESTS, BY STATE AND TERRITORY, 2003–04 TO 2007–08

State/territory <sup>a</sup>	2003–04	2004–05	2005–06	2006–07	2007–08
NSW	11 054	6 583	8 842	9 906	10 699
Vic	7 620	7 221	6 901	6 836r	6 681
Qld	22 065	23 355	23 235	22 699	17 130
SA	1 919	1 512	1 604	1 403r	1 760
SA (CENS) <sup>b</sup>	5 382	4 784	5 502	5 393	6 157
WA	6 108	5 173	4 203	5 774r	5 371
WA (CINs) <sup>c</sup>	994	3 782	3 208	1 878	1 464
Tas	1 638	1 353	929	1 733	1 954
NT	315	429	526	588	552
NT (DINs) <sup>d</sup>	300	434	481	339	378
ACT	267	228	240	224	227
ACT (SCONS) <sup>e</sup>	79	82	61	89	92
<b>Total</b>	<b>57 741</b>	<b>54 936</b>	<b>55 732</b>	<b>56 862r</b>	<b>52 465</b>

a. Includes arrests by state/territory police and AFP.

b. Cannabis Expiation Notices.

c. Cannabis Infringement Notices.

d. Drug Infringement Notices.

e. Simple Cannabis Offence Notices.



## NATIONAL IMPACT

The importation of cannabis into Australia generally remains unattractive due to a number of factors, including abundance of available product through domestic cultivation and risk of detection at the border. Detections of cannabis seeds at the border accounted for over 70 per cent of all cannabis detections in 2007–08. Although not commonly used in Australia, the largest single cannabis detection at the border in 2007–08 was of cannabis resin. This detection accounted for nearly half of the total weight of cannabis border detections in the reporting period.

Despite decreases in reported use, cannabis remains the most commonly used illicit drug in Australia. Cannabis accounted for 67 per cent of national drug arrests. This proportion is consistent with previous years. Cannabis was also the most seized drug in 2007–08, representing 68 per cent of all seizures in terms of number and 64 per cent in weight. Reductions in arrests, seizure numbers and reported use may indicate a potential short-term contraction of the cannabis market.

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