



# Cannabis

## Principal findings

- ◆ Cannabis remains the most widely used illicit drug in Australia. Between 1995 and 1998 the proportion of people aged 14 years or older who had used cannabis in the preceding 12 months increased from 13.2 per cent to 17.9 per cent (AIHW 1999).
- ◆ In 1998–99 there were 58 131 cannabis-related offences detected in Australia—a 10.1 per cent decline on the number in 1997–98 and a 7.3 per cent decline, to 69.6 per cent, as a proportion of all illicit drug offences.
- ◆ The total weight of cannabis importations detected at the Customs border rose from 38.4 kilograms in 1997–98 to 52.06 kilograms in 1998–99.
- ◆ The number of large outdoor cannabis crops being detected continues to decrease, although cultivators are tending to plant several smaller crops over an extended area in an attempt to avoid detection and the subsequent loss of their entire crop.
- ◆ Cultivation of hydroponic cannabis is increasing: law enforcement agencies have difficulty detecting these crops and there is growing consumer demand for hydroponic cannabis.
- ◆ Domestic production of hydroponic cannabis appears to have reduced the demand for imported herbal cannabis.

## Description

Confusion surrounds the various terms used to describe the cannabis plant. There are two basic types of plant with the genus *Cannabis*: ‘hemp’ is generally used to describe cannabis plants that are high in fibre content; ‘marijuana’ is used to describe cannabis plants that are high in psychoactive components. The word ‘cannabis’, derived from the Greek *kannabis*, is a generic term for a variety of drug preparations obtained from the cannabis plant—dried cannabis leaf, the dried flowering and fruiting tops of the female plant, cannabis resin (hashish) and cannabis oil (hash oil).

Many botanists consider that there are three distinct species of cannabis: *Cannabis sativa*, *Cannabis ruderalis* and *Cannabis indica*. The most common species is *C. sativa*, and it is the variations of this species that have sufficient quantities of active resin to produce psychedelic effects. *C. ruderalis* is a smaller species with few psychoactive components; it is plentiful in Siberia and western Asia and is used for fibre production. *C. indica*, a shorter, bushier plant with broad leaves, is plentiful in the Middle East and India and is the source of most of the world’s hashish (Inaba et al. 1997).

Modifications to *C. indica* have produced a stronger variety commonly referred to as ‘skunk’. *C. indica* is the preferred base plant for using the sinsemilla growing technique—‘sinsemilla’ means without seeds in Spanish (Inaba et al. 1997). The sinsemilla technique, used with both *C. sativa* and *C. indica*, increases the potency of the plant. The female plants are separated from the male plants before pollination: female plants produce more psychoactive resin than male plants, especially if they are not pollinated and are therefore without seeds.

The cannabis plant contains 421 known chemicals. Sixty-one of these are unique to the plant and are called cannabinoids; examples are cannabiol, cannabidiol, cannabiniolic acids, cannabigerol, cannabichromene, and several isomers of tetrahydrocannabinol. Four of the cannabinoids produced are powerful mind-altering substances (hallucinogens), the most powerful being delta-9-tetrahydrocannabinol, commonly known as THC. The highest concentration of THC is found in the flowers; the leaves also contain THC but to a lesser degree.

## Main forms

### Cannabis leaf

‘Cannabis leaf’, ‘head’ or ‘herbal cannabis’ refers to the tobacco-like substance produced by drying the leaves and flower tops of the cannabis plant. The New South Wales Crime Commission reported in 1998–1999 that a different type of cannabis, called ‘red devil’, was seized; which had pink-tinged leaves.

### Cannabis resin

Cannabis resin, or hashish, is made from the resinous material of the cannabis plant, which is collected, dried and compressed into a variety of forms such as small blocks, balls, cakes or sheets. Ranging in colour from light brown to black and in texture from dry and hard to soft and crumbly, it is usually crumbled and smoked in a pipe or hand-rolled cigarette with tobacco or cannabis leaf. An average dose would be 0.25 to 1 gram. Hashish can also be baked into biscuits or cakes.

### Cannabis oil

If the cannabinoids from plant material are extracted using a solvent such as acetone or methanol, the result is cannabis oil, or hash oil. It is a viscous liquid ranging in colour from amber to dark brown and varying in odour according to the solvent used.

## Synthetic forms

In the United States in 1985 the Food and Drug Administration approved a drug containing synthetic THC—<sup>dronabinol</sup>, brand name Marinol—to control nausea and vomiting caused by the chemotherapeutic agents used in the treatment of cancer and to stimulate appetite in AIDS patients. The synthetic cannabinoid nabilone<sup>®</sup> is licensed for similar use in Britain.

## Methods of administration

Cannabis leaf can be inhaled through a water pipe, or ‘bong’, or it can be smoked, with or without tobacco. Hash oil, used in minuscule portions, can be placed onto a tobacco cigarette, ‘joint’ or water pipe and smoked; it can also be heated and the vapours inhaled. Hashish can be mixed with tobacco and smoked, eaten after being incorporated in cookies, made into a ‘butter’ or ‘wine’, or eaten raw.

THC is insoluble in water, so any water-based extracts have little or no THC content. As a result, injection of cannabis is extremely rare.

## Effects

In recent years two important advances have added to our knowledge of cannabis and its impact on the human body.

The varying methods used to administer cannabis give rise to different patterns of absorption and metabolism. When the drug is smoked the level of THC in the blood reaches a peak in a relatively short time and then decreases to about 5 to 10 per cent of the initial level within the first hour. With ingestion, absorption is much slower, taking one to three hours for the THC to enter the bloodstream and delaying the onset of psychoactive effects; the ‘high’ may be lower but the period of intoxication is much longer (up to several hours) because of the digestive process.

Among the psychological effects of THC are impaired concentration and short-term memory; feeling calm, relaxed and talkative; enhanced sensory perception; and a distorted sense of time and space. Among the physical effects are impaired coordination and balance, increased appetite, rapid heartbeat, red eyes, dry mouth and throat, and drowsiness. Some users experience hallucinations with larger doses. Motor skills are particularly impaired if cannabis is used in combination with alcohol. Inaba et al. state that cannabis ‘... make[s] it more difficult to perform tasks which require depth perception and good hand–eye coordination ...’ (1997, p. 241).

THC can persist in the body of a chronic cannabis user for up to six months. Casual use of cannabis may result in positive urine tests for about five to seven days; daily use may result in positive tests for 10 to 15 days; and chronic heavy use may result in positive tests for about 12 months (Inaba et al. 1997).

Some users withdraw or experience fearfulness, anxiety and depression; a few experience panic, terror or paranoia, particularly with larger doses. The effect of cannabis on a user is unpredictable: it may act as a psychostimulant, psychodepressant or hallucinogen, depending on the strength of the product, the manner and circumstances in which it is used, and the individual (Moffitt et al. 1998).

## The international situation

### Overview

The International Narcotics Control Board has reported that in recent decades cannabis abuse has become widespread in virtually all

countries of the world (INCB 1999). It notes that in countries where there is large-scale traditional use of cannabis, the aim of the UN Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances is the elimination of traditional use and abuse of cannabis. In countries where the use of cannabis has evolved in recent years, the Board sees a need for the Convention to be fully implemented, including the use of prevention campaigns ‘... thereby correcting the false image that such abuse has gained among a large segment of the youth population’ (INCB 1999, para. 35).

### East and Southeast Asia

According to the International Narcotics Control Board, ‘Cannabis continues to be cultivated in many countries in [East and Southeast Asia], both for domestic consumption and for export. Cambodia has become a major source of cannabis for illicit markets throughout the world. A strong increase in trafficking in cannabis was reported in Malaysia’ (INCB 1999, para. 315).

The Australian Federal Police reported that, although the cultivation and abuse of cannabis are not serious problems in Vietnam, use of Vietnam as a transshipment country for Lao and Cambodian cannabis is becoming more prevalent.

AFP officers in Hong Kong reported that cannabis is priced at between AU\$1369 and AU\$1760 per kilogram and cannabis resin is priced at between AU\$2347 and AU\$2933 per kilogram.

### Cambodia

The US Department of State (1999) reported, ‘Marijuana is grown in Cambodia, some for domestic consumption, but in large part for export. There is no accurate estimate of the amount of land committed to marijuana production’ (Cambodia s. II). Further, ‘... although estimates of the amount of land under cultivation vary widely ... there is no reliable basis for concluding that it equals or exceeds 5000 hectares’ (Cambodia s. III).

### Indonesia

The Australian Federal Police report that cannabis cultivation is widespread in the northern Sumatran province of Aceh, although there is no evidence that Acehnese cannabis is exported from Indonesia to any neighbouring countries, including Australia. Acehnese cannabis is reported to be of poor quality compared with cannabis produced in the countries of the Golden Triangle (Burma, Laos and Thailand) and the Golden Crescent (Afghanistan and Pakistan). The Australian Federal Police also reported at least one 100-kilogram seizure of Acehnese cannabis in Jakarta and that the Indonesian National Police claimed to have eradicated 24.72 hectares of cannabis during 1998, down from 80 hectares in 1997. The Indonesian National Police report that Indonesian cannabis growers do not have the expertise to produce cannabis oil or resin, so Indonesian cannabis is sold only in plant or leaf form.

### Philippines

Cannabis is cultivated mainly in the extreme north and the south of the Philippines. According to the Australian Federal Police, farmers in mountainous areas of northern Luzon grow cannabis, their isolation inhibiting police action. In the south, on the island of Mindanao, it is grown as a means of financing the Moro Islamic Liberation Front and the New People’s Army.

The Australian Federal Police reports that cannabis production in the Philippines was severely affected in 1998 and 1999 by El Niño weather patterns. Nevertheless, 1998–99 saw approximately 2057 kilograms of dried cannabis leaf and approximately 1 million cannabis plants being seized by drug enforcement agencies.

In 1998–99 cannabis in the Philippines was priced at between AU\$0.40 and AU\$0.60 per gram.

### South Asia

Despite regular cannabis-eradication campaigns in India, Nepal and Sri Lanka, cultivation of the plant continues. The majority of the harvested crop is destined for use within South Asia, although a small amount is smuggled into countries outside the region. Infrequent reports of the abuse and sale of hash oil in the Maldives have also been received (INCB 1999).

### Nepal

During 1998 and early 1999 Nepalese authorities destroyed both illicit opium poppy and cannabis crops. The Australian Federal Police reports that the Governments of Nepal and India are party to an agreement whereby Nepal uses Calcutta as a ‘free port’ for imports and exports. As the International Narcotics Control Board has reported, ‘With the border between Nepal and India virtually open, the fight against illicit trafficking in the area is difficult’ (INCB 1999, p. 335).

In 1998–99 Nepalese drug prices reported to the Australian Federal Police were AU\$23 to AU\$45 per kilogram for cannabis and AU\$112 to AU\$157 per kilogram for hashish.

### Pakistan, Afghanistan and India

The Australian Federal Police report that cannabis production remains popular in Pakistan, Afghanistan and India. It further reports that most cannabis exported to Australia comes from Pakistan and Afghanistan in the form of cannabis resin; it is transported in bulk by freighter shipment from the Maccran coast of Pakistan or by container shipping from Karachi.

In 1998–99 the AFP reported prices in India at AU\$288 per kilogram for cannabis and AU\$1032 per kilogram for hashish.

### Europe

Cannabis trafficking is spreading across Europe. Increasingly large cannabis consignments are being seized—confirming the increase in the availability of cannabis in the illicit drug market. The main non-European sources of cannabis seized are Cambodia, Columbia, Morocco, Nigeria, Pakistan, Afghanistan and Thailand; Spain and the Netherlands are the two main cannabis distribution centres in Europe. In the Netherlands penalties for commercial production of cannabis have been doubled and cannabis production in greenhouses is to be made illegal (INCB 1999).

According to the US Department of State (1999), about 50 per cent of domestic cannabis is Dutch-grown; it is referred to as *Nederwiet* or, in English-speaking countries, ‘skunk’. In the Netherlands it is illegal to cultivate hemp for anything other than agricultural purposes (such as for use as wind barriers). The Dutch Government has given top priority to the investigation and prosecution of large-scale commercial cultivation of *Nederwiet*.

### Canada

Cannabis is grown throughout Canada but is particularly abundant in the Provinces of Quebec and British Columbia. Cannabis cultivation in British Columbia was reported as a sophisticated, billion-dollar-a-year growth industry. The US Department of State (1999) claims that about 60 per cent of the British Columbia cannabis harvest was smuggled into the United States. Royal Canadian Mounted Police investigations suggest that high-THC and hydroponically grown cannabis are occasionally exchanged pound for pound with cocaine from the United States.

Table 2.1: Countries of origin for detections of cannabis at the Customs border, by weight and number, 1998-99

Country/region	Weight (grams)	Number
United Kingdom	107.4	1
Unknown	2 259.0	6
Switzerland	800.0	3
India	8 915.7	8
Nepal	262.7	2
Germany	594.0	3
South Africa	930.0	4
Sri Lanka	112.0	1
Singapore	253.0	1
Papua New Guinea	30 085.9	2
China	3 000.0	1
Hong Kong	520.0	1
<b>Total</b>	<b>47 839.7</b>	<b>33</b>

Note: Includes cannabis leaf, cannabis resin and cannabis seed. Only seizures over 100 grams are reported.  
Source: Australian Customs Service.

### United States

The Australian Federal Police reports that in the United States the domestic cannabis-production industry appears to be expanding and there has been a noticeable move away from open-area cultivation to indoor hydroponic cultivation. In the State of California, Proposition 215 (relating to the legalisation of cannabis for medical use), continues to be in direct conflict with federal law.

### Fiji

Fiji Police (1999) reports that cannabis grows well in many parts of the country, including on remote islands, where cultivation areas and production levels are increasing. Because of the cash to be made from the illicit drug trade many farmers are concentrating on cannabis cultivation rather than traditional food crops.

Between 1990 and 1998 there was a gradual increase in the number of cannabis plants seized: in 1998 Fiji Police seized approximately 310 kilograms of dried cannabis product and 3800 plants.

At the 1999 Conference of Commissioners of Police of Australasia and the Southwest Pacific, Fiji Police reported that cannabis is '... the main illicit drug, predominantly of local origin and basically for local consumption but, with an increasing tendency for movement between towns and cities, the threat could be also be shared by the neighbouring countries' (1999, p. 3). In view of the increasing level of cannabis cultivation and Fiji's relatively small population, it is likely that some cannabis is being exported to Australia.

### Papua New Guinea

The Australian Federal Police reports that drug production in Papua New Guinea revolves mainly around the production of cannabis. Unseasonal rains in 1999 have seen a boom in cannabis production, resulting in increased domestic consumption and growing interest in exporting the drug. The AFP reports that, although production levels are high, the methods of transportation within and out of PNG, coupled with the apparent lack of offshore contacts, create difficulties for major consignments leaving the country. Any major overseas consignments of PNG cannabis are dependent on

expatriate connections, and sea routes are the most popular method of exportation. Some PNG nationals describe cannabis production as their only means of making a living.

The Australian Federal Police further reports that PNG cannabis production will continue to pose a threat to Australia. The Highland provinces are the main cannabis-growing area, although there are indications of increasing production along the Owen Stanley Ranges to Tapini in Central Province. The main points for cannabis export are reported to be Madang, Lae, Milne Bay, Port Moresby, Kerema, Kikori and Daru. The points of entry into Australia for detected PNG cannabis were Torres Strait, Cape York, Cairns and Townsville. Various craft—dinghies, large motorised vessels and light aircraft—are the preferred method of transportation. The Australian Federal Police also reports that increased attention by law enforcement agencies has led to the trade in cannabis being forced further east, from the Daru area to the Gulf Province area, through locations such as Kikori, affording exporters easier access to the Australian market.

In 1997–98 trafficking in cannabis and guns in the Torres Strait and Gulf of Carpentaria region was of particular concern to the Australian Federal Police. It reports that in 1998–99 the exchange of firearms for cannabis in Papua New Guinea decreased and that the bartering of cannabis for electrical goods and alcohol became more popular.

Further, the Australian Federal Police reports that the price of PNG cannabis has decreased by 49 per cent, from an average of AU\$208 a kilogram in 1998 to an average of AU\$106 a kilogram in 1999. It considers it unlikely that the price will increase: increased production (leading to over-supply) and the current economic climate will act against this. PNG nationals involved in cannabis production are reportedly willing to accept any price.

## The Australian situation

### Importation

The number of cannabis importations detected at the Australian Customs border rose marginally, from 742 in 1997–98 to 806 in

1998–99. Customs detected 52.06 kilograms in 1998–99, a slight increase on the 38.22 kilograms detected in 1997–98. This is in contrast to Customs detections in 1996–97 where several multi tonne seizures were made and a total 24.29 tonnes of cannabis was seized. The lack of multi tonne seizures thereafter has probably been the result of the disruption in major international syndicates by the joint AFP and Customs operation in 1996–97.

During 1998–99 the largest single Customs border detection of cannabis resin was 5.9 kilograms, brought from India into Melbourne by an airline passenger. The largest single border detection of cannabis during 1998–99 was 28.67 kilograms from Papua New Guinea. India, Papua New Guinea and China represented the countries which had the largest quantity of cannabis importations with relatively small seizure numbers. On the other hand 213 seizures came from the United Kingdom and 117 seizures from the Netherlands, but the total quantity of cannabis from both countries was less than a kilogram each. A majority of seizures from the Netherlands were seeds while the seizures originating from the United Kingdom were mostly small amounts of resin. Table 2.1 shows the countries of origin for cannabis importations of over 100 grams detected at the Customs border in 1998–99.

Figure 2.1 shows that during 1998–99 parcel post detections constituted 73 per cent of Customs detections of cannabis. The parcel post detections were predominantly of cannabis resin from the United Kingdom, Spain, India and the Netherlands and of cannabis seeds from the Netherlands and the United Kingdom.

The United Kingdom, India and Spain appear to be significant transit points for cannabis resin imported into Australia.

The majority of detections were of cannabis resin, herbal cannabis and cannabis leaf. There was one instance of approximately 3 kilograms of cannabis seeds from China being detected.<sup>1</sup> More seizures, but of smaller amounts, were detected coming from the United Kingdom and the Netherlands.

## Exports

During 1998–99 there were 43 Customs ‘export’ detections of herbal cannabis, cannabis resin and cannabis seeds originating in Australia. As with the importations, the most common method for

exporting was by parcel post, which accounted for 40 ‘export’ detections: 21 from New South Wales, 17 from Queensland, and two from Victoria. Of the 43 ‘export’ detections, only one was nominated as being destined for another country; the remainder were destined for the Australian market.

## Concealment methods

As was the case in previous years, concealment methods for importing cannabis were diverse. The Australian Federal Police reports that in November 1998 a 542.8-gram shipment of cannabis resin from India was seized at Melbourne Airport; the airline passenger involved had concealed the resin internally, in the form of pellets. In another instance, in December 1998, a 5.9-kilogram shipment of cannabis resin from India was seized at Melbourne Airport; the airline passenger involved had concealed the resin in three wooden statues.

The largest border detection of cannabis during 1998–99 was 28.67 kilograms from Papua New Guinea. The shipment was seized from a container at Townsville in March 1999; the cannabis had been concealed in lengths of downpipe hidden in the walls of an empty shipping container.

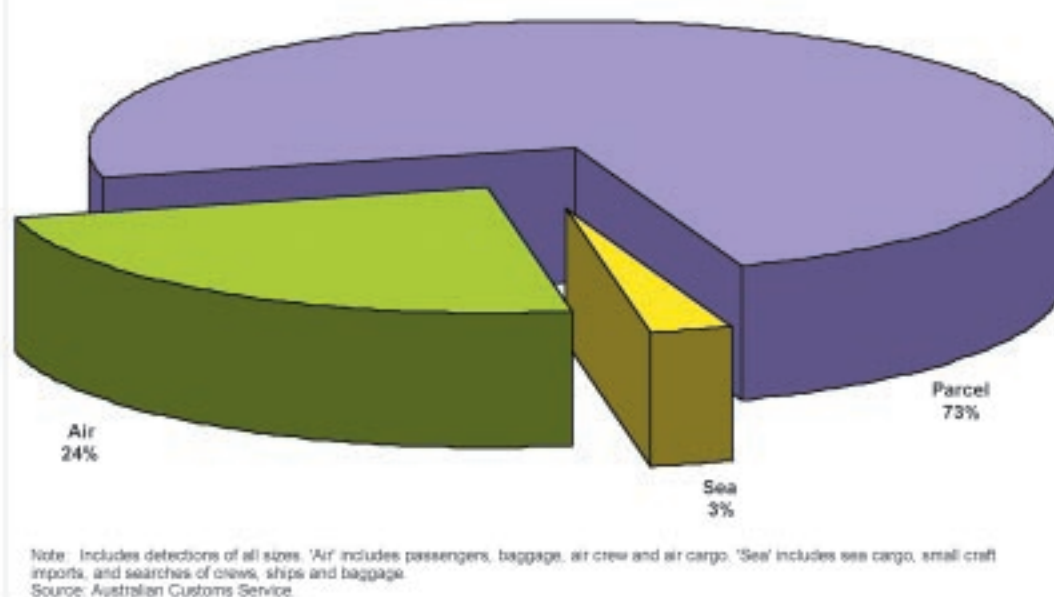
Smaller amounts of cannabis and cannabis products—mainly seeds—were found in postal articles.

## Domestic production

The domestic cannabis-production industry appears to be continuing to expand and the trend away from open-area cultivation to indoor hydroponic cultivation continues. All jurisdictions reported increases in the number of hydroponic cannabis crops detected.

It is difficult to estimate the total amount of cannabis produced in Australia, hydroponically or otherwise. Hydroponic production allows growers to secrete their crop in a room, building, roof area, or virtually any other concealed space. This, of course, hinders law enforcement agencies in their efforts to detect cannabis production through conventional means. The ability to effectively conceal hydroponic cannabis production and to produce continuously, coupled with the reputedly higher THC levels, contribute to the desirability of hydroponically grown cannabis.

Figure 2.1: Cannabis importation methods: detections at the Customs border, 1998–99



In South Australia, the Australian Capital Territory and the Northern Territory—where some cannabis offences (including some cannabis possession) have been decriminalised—a continuing increase in the number of suppliers of hydroponic equipment has been noted.

As reported by the ABCI in 1997 and 1998, syndicated cannabis-cultivating groups continue to operate in South Australia. These groups are reported to be growing the legislated maximum amount of cannabis (previously 10 plants per person but since June 1999 only three) that does not attract criminal sanctions. The cannabis is distributed to customers in South Australia and elsewhere. New South Wales Crime Agencies report that during 1999 a number of people were arrested, in South Australia and New South Wales, and charged with offences relating to an alleged large-scale cannabis-cultivation syndicate based in South Australia. The presence of organised groups involved in syndicated cannabis cultivation is consistent with trends identified in Europe, where, as the International Narcotics Control Board reports, ‘Indoor cannabis cultivation is increasingly being controlled by criminal organisations’ (INCB 1999, para. 439).

The Western Australia Police Service reported that in 1998–99 there was one instance of a ‘specialist’ being employed to perform specific tasks in the cannabis-production process. The person was contracted from South Australia and subsequently implicated in two cannabis crops in Western Australia.

It appears that there is little cannabis resin or oil produced in Australia: most of it seems to be imported. In 1998–99 there were only three significant detections and one minor one of cannabis oil production; there were two significant detections in 1997–98. The Queensland Police Service reported two detections of significant production of hash oil. In one instance a THC laboratory was discovered and approximately 10.5 kilograms of cannabis leaf were found in the premises’ garage. The cannabis had been macerated using a blender and then extracted using acetone to produce hash oil. Queensland Police reported other instances of seizures of cannabis resin and oil but it is not known whether the drugs were locally produced or imported.

The Northern Territory Police Service reported one significant seizure, of approximately 12 litres of locally produced cannabis oil in 1998–99. It also reported that cannabis is the most common illicit drug available in the Territory: it grows well in all parts of the Territory. Victoria Police reported one seizure of locally produced hash oil and cannabis resin at Carrum Downs. South Australia Police reported seizures of locally produced cannabis resin and larger amounts being available, although providers are having difficulty disposing of the resin because consumers prefer hydroponic cannabis.

Many jurisdictions reported that advertisements and information about cannabis production are readily available in both printed and electronic formats, including on the Internet.

### Indoor and hydroponic production

Hydroponic cannabis remains popular with cultivators and users in Australia. A number of magazines, both alternative and mainstream, and a number of Internet websites advertise hydroponic components and chemicals and provide horticultural advice. Two distinct methods can be used to cultivate indoor cannabis. The first method involves plants that are potted and grown in soil or a growing medium. Plants cultivated in this way generally have low THC levels. The second method involves hydroponic cultivation. Soil is not essential: other inert growing mediums such as perlite and vermiculite are used.

Crops were detected in residential and commercial premises, in trailers and caravans, and in hidden rooms beneath houses. Victoria Police reported that in a number of cases residential premises were rented for the sole purpose of hydroponically cultivating cannabis. In some of these cases doors to a room were plastered over to create the illusion of two rooms rather than three and access to the third room was through a wardrobe. Victoria Police also reported that indoor and hydroponic crops are generally becoming larger and better organised. There have been instances of young women with children being ‘employed’ to cultivate cannabis in a room at their home then selling the cannabis on consignment to another person. The Western Australia Police Service reported evidence of ‘networked’ premises being used for hydroponic cannabis cultivation; this involves a number of residential premises being used by one group or individual.

South Australia Police reported an increase in hydroponic cultivation of cannabis and that cultivation was becoming more sophisticated and yields were increasing. The plants seized are believed to have high THC levels and to be of a smaller, high-yield variety. Cannabis cultivators are growing as few as three to four plants yet producing the same yield as was previously produced by nine plants.

Information from the New South Wales Police Service, indicates that about 9930 outdoor cultivated cannabis plants were seized in the State in 1998–99 during cannabis-eradication operations. This figure does not include seizures made by individual police areas throughout the State during other operations.

The Victorian Forensic Science Centre reported that it attended 27 crop sites in 1998–99. Of those, 20 were cultivated using hydroponic means and two were classified as ‘indoor soil’ cultivation. The hydroponic crops varied in size from three to 428 plants and most were detected in urban areas.

### Indicators for indoor and hydroponic production

There are a number of potential indicators of indoor or hydroponic cannabis cultivation:

- the purchase of hydroponic equipment and nutrients, minerals and chemicals;
- abnormal electricity consumption;
- the presence of air-ventilation systems;
- the installation of security devices in unusual places;
- the disposal of nutrient packaging in household or commercial garbage;
- exhaust fans running constantly or in cycles.

### Outdoor production

Outdoor crops continue to be grown mainly on Crown land and in national parks. The New South Wales Police Service, reported that most outdoor cannabis cultivation takes place on the mid-north and north coast of New South Wales, predominantly in State forests and on Crown land. It further reports that cultivators are planting a number of smaller crops over a large area in an attempt to avoid detection and the subsequent loss of an entire crop.

Victoria Police reported that, although the majority of cannabis crops are cultivated in residential areas, outdoor crops are most commonly grown in national parks. It also reported a trend towards smaller crop sites in bush areas. During 1998–99 outdoor cannabis crops varied in size from 97 to 880 plants and most were found in rural areas.

The Queensland Police Service reported one seizure, of 3200 plants, at a site at Parker's Creek and several crops in excess of 500 plants being found in open bushland. It also reported that the number of plants detected in outdoor plantations has been declining since 1997. As in other jurisdictions, growers in Queensland are cultivating a number of smaller crops to reduce the chances of detection.

Tasmania Police reported that during the cooler winter months the wholesale price of cannabis increased: this may mean that outdoor cultivation is still the main source of cannabis in that State.

There has been a notable decline in detections of large-scale cannabis cultivation in the Northern Territory. The large crops of previous years—10 000 to 20 000 plants and more—are no longer being detected and there has been a marked increase in small hydroponic cultivation in urban and semi-urban areas. The Northern Territory Police Service reports that vacant Crown land, remote areas of cattle properties, and Aboriginal land are being used for cannabis cultivation.

### Crop detection

The remoteness of some outdoor cannabis plantations tends to decrease the chance of detection by law enforcement agencies. On many occasions community members come across these plantations during the course of their work—national park rangers are an example—or while participating in leisure activities such as camping, bushwalking and four-wheel driving.

The New South Wales Police Service reports using the National Parks and Wildlife helicopter to detect cannabis cultivation in Kuring-gai National Park and the Drug Trafficking and Production Unit reported that it is beginning to use satellite imagery for the Cannabis Eradication Program. Victoria Police reports using FLIR (forward-looking infra-red radar) to detect hydroponically cultivated crops and determine such crops' location within premises.

### Crop protection

In 1998–99 a number of measures were used to protect cannabis crops. Most were designed primarily to prevent damage from wildlife and to prevent theft. Victoria Police reported instances of security devices being detected at cannabis crop sites, although the devices were apparently designed not to harm but rather to alert cannabis cultivators to intruders. Among other protection measures being used in 1998–99 were

- razor blades inserted to the handles of pots containing cannabis plants;
- rabbit traps buried in pits in cannabis crops;
- fishing hooks fastened onto wood;
- 'punji' boards—planks of wood with nails embedded in them.

Concealment methods have become more innovative. The National Crime Authority reported that in one instance a house in Victoria had every window sealed with metal shutters. Timers were used to operate radios and televisions within the premises, and a battery-operated air freshener was used to reduce odours. The Queensland Police Service reported an underground mining shaft and a buried shipping container being used for cannabis cultivation. The Western Australia Police Service reported the use of a shipping container for hydroponic cultivation that was buried on a semi-rural property.

### Licit production

In South Australia s. 56 of the *Controlled Substances Act 1984* enables the Health Commission to issue licences to produce, sell, supply or possess a prohibited substance for research, instruction or training purposes only. The licences are issued subject to conditions and, in the case of cannabis, may specify such conditions as the variety that can be produced, the address at which it can be produced, security arrangements, supervision, record keeping, reporting, storage of seed or the harvested crop, the processor, transport and disposal. No new licences were issued for 1998–99.

In 1996 the Western Australia Health Department issued 11 licences under the *Poisons Act 1964* for hemp trial sites. During 1998–99 operations continued at three of the licensed sites. At all sites the residue was destroyed at the completion of each trial planting.

In Victoria the cultivation, processing and sale of low-THC cannabis for commercial and research purposes related to non-therapeutic use is now regulated under Part IVA of the *Drugs, Poisons and Controlled Substances Act 1981*. Part IVA of the Act came into operation on 1 October 1998 and is administered by the Department of Natural Resources and Environment. Three people were authorised to cultivate and process low-THC cannabis in 1998–99. Their authorities are valid for three years. Only two crops, each of less than half a hectare, were grown in 1998–99 and both were for research purposes. No significant commercial production is anticipated in 1999–2000.

One licence was issued in Tasmania during 1998–99, to the Tasmanian Hemp Company, which had also been licensed in previous years. The 1998–99 licence covered four separate growing sites amounting to 0.54 hectares.

Queensland has begun its second season of trial growing of low-THC hemp for commercial fibre production. Regulations allow trials to be conducted for three years with an optional 12 months. THC levels are set at 0.35 per cent for growers and 1 per cent for researchers. Current legislation does not allow for the development of end product such as oil. By virtue of the wording of Part 5B of the State's *Drugs Misuse Act 1987*, an exemption held by any person under the licensing agreement is immediately lost should that person fail to comply with the conditions of the exemption. Authorised officers monitor the delivery and movement of seeds and the planting, sampling, harvesting and handling of the fibre.

### Distribution

The most common methods of transporting cannabis in Australia have not changed: all law enforcement agencies reported that motor vehicles remain the predominant method used by distributors.

The New South Wales Police Service reported that cannabis has been found secreted in motor vehicles travelling from South Australia. The New South Wales Crime Commission reported that vehicles from South Australia were being detected with false sections in them and that legitimate trucking operators had become involved in the transportation of cannabis from South Australia to Sydney.

South Australia Police reports that substantial amounts of cannabis produced in South Australia are being transported interstate. Various methods are being used, among them post, freight, air passengers, private vehicles and the heavy vehicle industry. Anecdotal evidence suggests that cannabis is being used for purchasing heroin and designer drugs from eastern State suppliers for distribution within South Australia.

Hayes et al. (1999) have reported that cannabis dealing in South Australia has increased significantly and involves a more diverse dealer population, including adults, parents, young women and adolescents.

## Market indicators

### Price

Most jurisdictions reported that in 1998–99 the price for cannabis ‘head’ remained relatively stable and the price for cannabis leaf continued to decline, although there are differences between jurisdictions. Reports also suggest that the price for hydroponic cannabis and cannabis resin has remained stable.

All jurisdictions reported that hydroponic cannabis commanded a higher price and that hybrid species such as the domestically produced ‘skunk’ dominate the market. South Australia Police reported that hydroponic cannabis could be bought for an average of \$3300 per pound before transportation to other jurisdictions, where it is sold for an average of \$5500 per pound. Numerous seizures of up to 60 pounds of cannabis have been reported in South Australia. The Western Australia Police Service reported that ‘normal’ cannabis was priced at between \$250 and \$260 an ounce, whereas hydroponic cannabis was selling for between \$350 and \$450 an ounce.

McKetin et al. (1998) reported that the price per ounce and per gram of cannabis had decreased slightly in Sydney, Adelaide and Melbourne since 1997. Adelaide was the least expensive, with cannabis being priced at between \$200 and \$250 an ounce.

Chapter 11 provides details of prices for all types of cannabis by State and Territory.

### Seizures

In 1998–99 in Australia there were 53 349 seizures, weighing a total of 4270.92 kilograms. This includes detections at the Customs border (52.06 kilograms) and all State and Territory police and Australian Federal Police domestic seizures.

In 1997–98 in Australia there were 54 925 seizures, weighing a total of 15 996.63 kilograms, with Customs detections accounting for 38.22 kilograms detected Australia-wide.

## Cannabis offences

In 1998–99 there were 58 131 cannabis offences recorded, constituting 69.6 per cent of all drug-related offences in Australia. This includes cannabis-related arrests and offences connected with cannabis expiation notices in South Australia, drug infringement notices in the Northern Territory, and simple cannabis offence notices in the Australian Capital Territory.

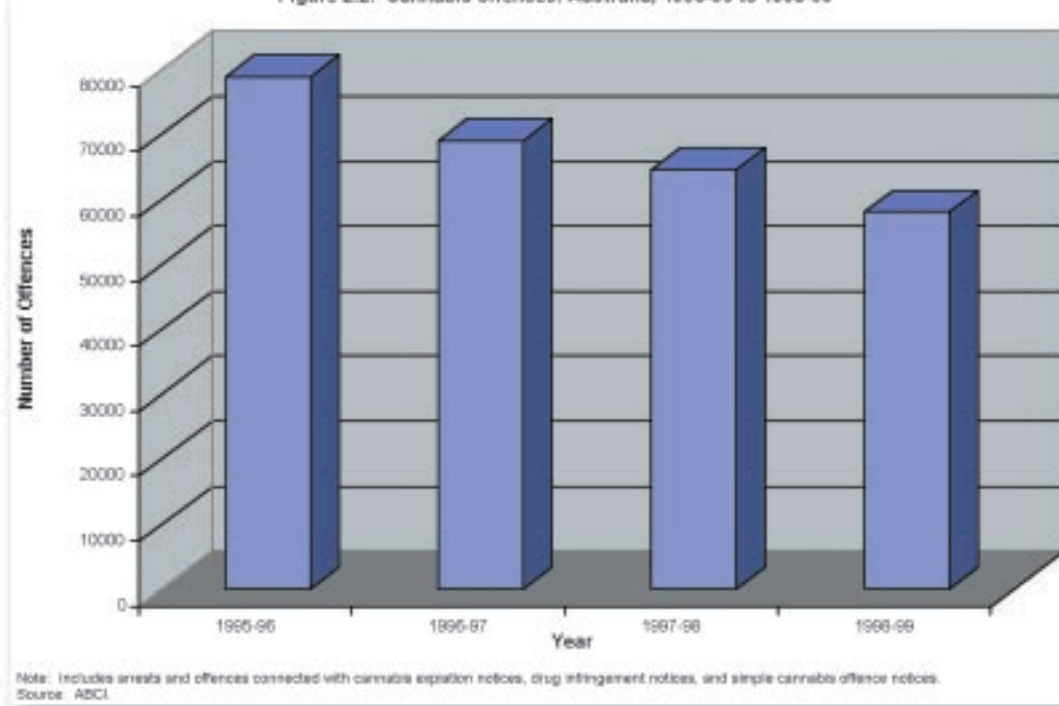
Figure 2.2 shows the number of cannabis offences in Australia from 1995–96 to 1998–99. The steady decline in the number of offences is evident.

The decrease in the number of cannabis offences did not occur in all States and Territories. Table 2.2 shows the number of offences detected in each jurisdiction from 1995–96 to 1998–99 and the percentage change from 1997–98 to 1998–99.

In 1998–99 Western Australia, South Australia, Tasmania and the Australian Capital Territory experienced a decrease in the number of reported cannabis offences. The number of reported offences in South Australia and Western Australia has been declining since 1995–96. In the period 1995–96 to 1997–98 Victoria recorded the biggest decrease in the number of reported cannabis offences—from 19 120 to 9034, a 53.1 per cent decrease. In 1998–99 Victoria reported a marginal increase in the number of reported cannabis offences, although that jurisdiction has seen the biggest overall decrease since 1995–96.

Western Australia reported the biggest decrease in 1998–99. A redirection of police resources away from arresting for minor cannabis offences to focus on major drug problems is thought to have contributed to this. In October 1998 the Western Australia Police Service embarked on a 12-month trial in the Mirrabooka

Figure 2.2: Cannabis offences: Australia, 1995-96 to 1998-99



**Table 2.2: Cannabis offences, by State and Territory, 1995-96 to 1998-99**

State/Territory	1995-96	1996-97	1997-98	1998-99	% change 1997-98 to 1998-99
New South Wales	14 677	14 146	15 460	15 738	1.8
Victoria	19 120	9 121	9 034	9 286	2.8
Queensland	9 436	14 839	13 021	13 386	2.8
Western Australia	13 903	12 704	11 487	6 087	-47.0
South Australia	18 477	16 082	13 452	11 968	-11.0
Tasmania	2 518	1 079	1 196	736	-38.5
Australian Capital Territory	439	485	374	237	-36.6
Northern Territory	378	680	635	693	9.1
<b>Total</b>	<b>78 948</b>	<b>69 136</b>	<b>64 659</b>	<b>58 131</b>	<b>-10.1</b>

Note: Includes arrests and offences connected with cannabis expiation notices, drug infringement notices, and simple cannabis offence notices.  
Source: ABCI.

and Bunbury police districts, whereby people committing minor cannabis offences were issued cautions; this may also have contributed to the fall in the number of offences in 1998–99.

Reported cannabis offences per 100 000 population, as shown in Table 2.3, vary considerably, ranging from 76.77 in the Australian Capital Territory to 802.99 in South Australia. Overall, there has been a steady decline in the rate of offences reported, with Western Australia, Tasmania and the Australian Capital Territory showing the largest declines in 1998–99.

### Cannabis infringement notices

Three law enforcement agencies in Australia—those in the Northern Territory, the Australian Capital Territory and South Australia—issue infringement-type notices for certain minor cannabis offences. In 1998–99 in the Northern Territory, drug infringement notices constituted 49.5 per cent of cannabis offences reported. In the same period in the Australian Capital Territory simple cannabis offence notices constituted 64.1 per cent of cannabis offences and in South Australia cannabis expiation notices constituted 78.5 per cent of cannabis offences. (Chapter 11 provides a breakdown of cannabis offences.)

Table 2.4 shows cannabis infringement notices, by consumer and provider, for 1995–96 to 1998–99. In South Australia there was a marked decrease in the number of cannabis expiation notices issued, predominantly for consumer offences, from 1995–96 to 1997–98 and a marginal decrease from 1997–98 to 1998–99. Whilst it is difficult to isolate any single factor responsible for this trend, it could be the result of the redirection of police attention to more serious drug offences. On the other hand, in the Northern Territory the number of drug infringement notices rose to its highest level in 1998–99.

### Patterns of cannabis use

It is difficult to accurately determine the extent of cannabis use in Australia, although surveys conducted by a variety of health, drug and research organisations, coupled with police arrest and seizure data, provide reasonable indicators of the frequency of use. Northern Territory Police reported that because of the highly transitory nature and the relative youth of the Territory's population, rates of use are more likely to be higher there than in other parts of Australia.

Most law enforcement agencies reported that all demographic groups used cannabis and that use was particularly prevalent among the younger age groups and the unemployed.

**Table 2.3: Cannabis offences per 100 000 population, by State and Territory, 1995-96 to 1998-99**

State/Territory	State population	1995-96	1996-97	1997-98	1998-99
New South Wales	6 384 258	235.21	226.70	245.15	246.51
Victoria	4 689 776	417.38	199.10	195.23	198.00
Queensland	3 485 172	279.67	439.80	379.58	384.08
Western Australia	1 847 803	780.19	712.91	634.25	329.42
South Australia	1 490 419	1 251.83	1 088.97	907.16	802.99
Tasmania	471 124	531.22	227.64	253.50	156.22
Australian Capital Territory	308 707	142.53	157.47	121.04	76.77
Northern Territory	191 375	205.43	369.57	335.65	362.12

Note: Population data from the Australian Bureau of Statistics, current at December 1998. Includes arrests and offences connected with cannabis expiation notices, drug infringement notices, and simple cannabis offence notices.  
Source: ABCI

Table 2.4: Cannabis infringement notices, by consumer and provider, 1995-96 to 1998-99

State/Territory	1995-96		1996-97		1997-98		1998-99	
	Consumer	Provider	Consumer	Provider	Consumer	Provider	Consumer	Provider
SA a	12 978	3 423	9 336	3 321	7 969	2 783	7 279	2 120
NT b	b	b	205	23	201	17	304	
ACT c	223	72	240	78	151	17	91	61

a. Cannabis expiation notices  
 b. Drug infringement notices—not introduced until 1996  
 c. Simple cannabis offence notices  
 Source: ABCI

McKetin et al. state,

Findings from the 1998 National [Drug Strategy] Household Survey suggest a large proportion of the population use cannabis, and that the number of cannabis users has increased since 1995. Nearly one in five survey participants (17.9%) had used cannabis in the last year, and 39.3% had tried cannabis in their lifetime. These figures suggest an increase in cannabis use relative to 1995, when 31.1% of survey participants had ever used cannabis and 13.1% had used in the last year. (1999, p. 22)

More survey respondents had used ‘heads’ than any other form of cannabis (57 per cent in 1998 and 53.9 per cent in 1995); those who had used ‘skunk’ rose (from 4.4 per cent in 1995 to 10.1 per cent in 1998) but use of cannabis resin and oil (at 0.6 per cent and 0.1 per cent respectively) in 1998 was even lower than previously (P. Williams (Australian Institute of Criminology) 1999, pers. comm., 1 November).

The authors further state, ‘In 1998 it is estimated that there were over 2.7 million Australians aged 14 years or older who were recent marijuana/cannabis users ...’ and ‘...there were over half a million teenagers who used marijuana/cannabis in 1998’ (AIHW 1999, p. 23).

The International Narcotics Control Board reports, ‘Surveys in the United States have shown that the upsurge of cannabis abuse among young people is directly linked to propagation of the false perception that cannabis abuse is harmless’ (INCB 1999, para. 224).

Males are reported to be more likely to have ever used cannabis than females. There was a 75 per cent increase in the number of people aged 40 to 49 years having ever used cannabis between 1995 and 1998. In the 1998 Survey 54 per cent of males in this age group were reported to have ever used cannabis; for females the proportion was 30 per cent. There were consistent increases in proportions ever using cannabis, across all age groups except the 40 to 49 age group and females aged 14 to 19 years, for which the increases were larger.

Figure 2.3 shows cannabis offences, by age and gender, for 1998–99. A disproportionate number of males are detected across most age groups, particularly in the 15–19 to 40–44 year age groups. Figure 2.4 shows that this is particularly noticeable in relation to offences for consumers. The primary age groups for male consumer offences are 15–19 to 25–29 years. The number of male providers is also relatively high, and the primary age groups are similar to those for male consumers.

Figure 2.3: Cannabis offences, by age and gender, 1998-99

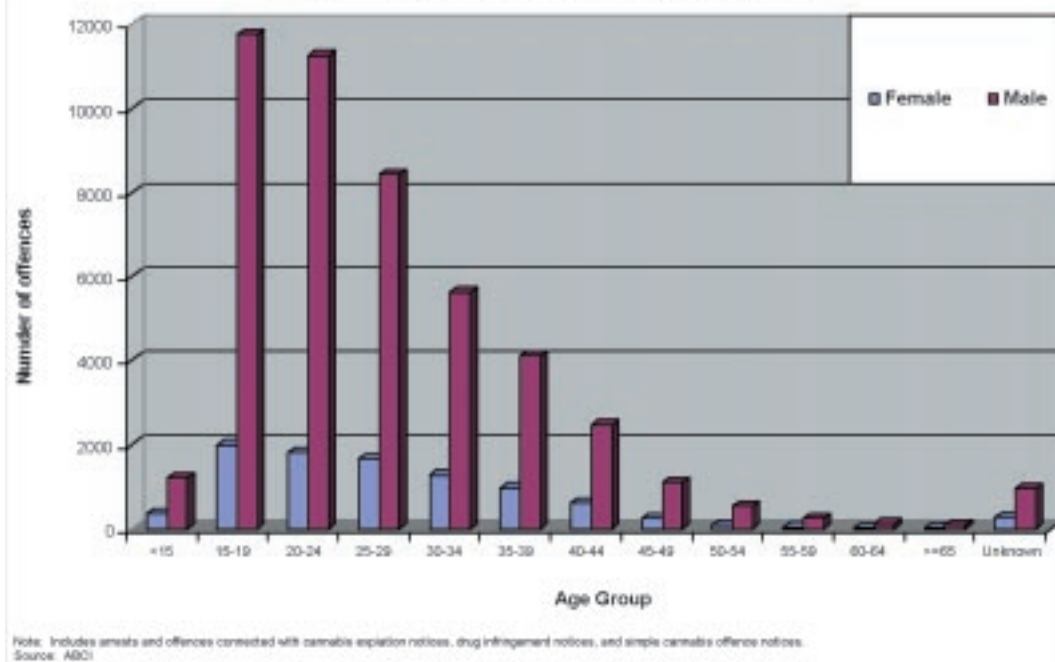
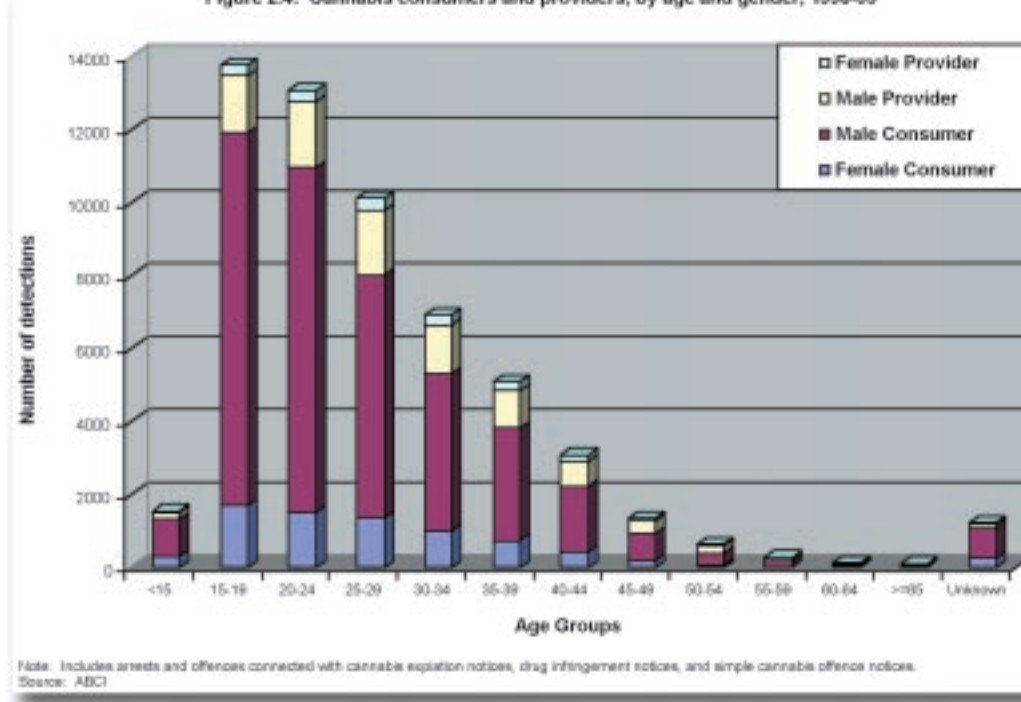


Figure 2.4: Cannabis consumers and providers, by age and gender, 1998-99



## Legislative changes

### South Australia

On 3 June 1999 regulations under South Australia's *Controlled Substances Act 1984* were amended to reduce from 10 to three the number of cannabis plants subject to expiation. Any person found cultivating up to three plants will be issued with an expiation notice; people found cultivating four or more plants will be liable to prosecution under s. 32 of the Act.

A Bill was introduced to rectify deficiencies in s. 46 of the Act in relation to forfeiture of equipment and items used in drug offences, such as hydroponics and laboratory equipment, and to allow for the immediate disposal of controlled substances and dangerous materials, including hazardous chemicals used in the manufacture or production of illicit drugs.

### The Northern Territory

On 5 May 1999 amendments were made to the Northern Territory's *Misuse of Drugs Act 1999*. Producers of products made from processed hemp fibre or hemp seed with a THC content of no more than 0.005 per cent are no longer liable to prosecution under the amended Act. The amendments bring the Act into line with the national approach and the recent amendments to the Northern Territory's *Poisons and Dangerous Drugs Act 1997*.

### Victoria

On 1 August 1998 Victoria Police re-introduced the Cannabis Cautioning Program. Previously only a six-month trial conducted in the Broadmeadows area—as reported in the *Australian Illicit Drug Report 1997-98*—the Program has now been extended across the State. During the initial trial 97 cautions were issued and only eight recipients were caught re-offending. The caution notice given to offenders contained information about the health and legal ramifications of cannabis use and a 24-hour confidential telephone drug information line.

### Western Australia

On 1 October 1998 the Western Australia Police Service introduced

the Cannabis Cautioning System for a 12-month trial in the police districts of Mirrabooka and Bunbury. The Service considers that the System will lead to a reduction in the resources currently used to pursue prosecutions for simple cannabis offences and that a formal system of cautioning will provide clarity for police officers' current application of discretion (including formal procedures for confiscation of cannabis). The System may 'net' more cannabis users, deal with them in a more meaningful way, and allow police resources to be directed towards more serious drug offences.

Adult offenders in possession of less than 50 grams, who have no prior drug-related offences and who are not under investigation for any other matter, are eligible to be considered for a caution. The offences of possession of cannabis plants, cannabis resin or cannabis oil or smoking paraphernalia are not included in the System. Provision of a caution is conditional on participation in an education session, and failure to attend the session results in a summons being issued for the offence. The opportunity to enter into extended treatment for cannabis dependence is also provided. Only one caution is offered: the courts deal with subsequent offences.

### Queensland and New South Wales

In Queensland and New South Wales there are no cannabis infringement notices and offenders are processed through the court system, by either summons or arrest and charge. In April 1998 Queensland began using 'notices to appear'. These notices are primarily court attendance notices—not cannabis infringement notices—directing the accused person to attend a court to have a matter dealt with by a magistrate. The notices cover all drug-related offences, including minor cannabis ones. A person issued with such a notice can be directed to attend a police station to be fingerprinted and photographed. If convicted, a person can be ordered to pay a monetary penalty or serve a custodial sentence.

### Tasmania

On 1 July 1998 Tasmania Police began the Cannabis Cautioning Program for people aged 17 years and older who are found in possession of 50 grams or less of dried cannabis and who have committed no other offence at the time of the detection. This

alternative criminal justice approach will be trialed for a period of twelve months, and following independent evaluation of the program, Tasmania Police will consider the continued application of this Cannabis cautioning system.

## Social and law enforcement concerns

### Cannabis—a ‘gateway’ drug?

It is often claimed that some people who use cannabis will move on to using other illicit drugs. Hall et al. have noted, ‘A major concern about cannabis has been that its use in adolescence may lead to, or increase the risk of, using other more dangerous illicit drugs, such as cocaine and heroin’ (1994, p. 92). They claim much research has been done to determine whether cannabis use can lead to the use of more dangerous drugs. Hall et al. say, however, ‘On the available evidence, the case for a pharmacological explanation of the role of cannabis use in progression to other illicit drug use is weak. A sociological explanation is more plausible than a pharmacological one’ (p. 97). They further discuss the belief that heavy cannabis use by people, with specific pre-existing personality and attitude traits, predisposes them to use other drugs.

Inaba et al. discussed the idea of cannabis being a ‘gateway’ drug and the possibility of a cannabis user progressing on to other drugs:

No two people will have the exact same reaction to marijuana but what has been observed is that those who continue to use it regularly establish a pattern of use and begin to find opportunities where drugs other than marijuana are available. They will probably hang around others who smoke marijuana or use other drugs, so the opportunities and pressure to experiment with other drugs are greater. (1997, p. 248)

### THC (delta-9-tetrahydrocannabinol)

Anecdotal information from law enforcement agencies and health professionals suggests that the level of THC in cannabis is the ultimate determinant of demand in the illicit drug market.

Hall et al. state, ‘The concentration of THC in a batch of marijuana containing mostly leaves and stems may range from 0.5–5 per cent, while the “sinsemilla” variety with heads may result in concentrations from 7–14 per cent. The concentration of THC in hashish generally ranges from 2–8 per cent, although it can be as high as 10–20 per cent’ (cited in ABCI 1998, p. 19).

It is apparent that THC levels can vary considerably; research has shown this. Currently there is speculation that the new hybrid cannabis varieties have significantly higher THC levels.

The *Australian Illicit Drug Report 1997–98* stated,

There is a need for a national short-term project to analyse the THC content of Australian cannabis and cannabis products. Mechanisms already exist for measuring THC levels; they are primarily used in the licit commercial hemp industry. Protocols could also be established at a central forensic service location to facilitate the analysis of THC levels in cannabis used illicitly (ABCI 1998, p.19).

Hall and Swift note, ‘Given public concern about an alleged increase in the THC content of cannabis, it is desirable to have better evidence on this issue. Unsubstantiated assertions in the media are a poor basis for public policy in this or in any other areas of public concern’ (1999, p. 11).

## Health

It is difficult to know the actual levels of harm that can be attributed to cannabis use. Various factors are used to determine whether cannabis, or any drug, has an adverse effect on the physical or psychological health of the user.

The International Narcotics Control Board considers that governments should investigate the possible medical uses of cannabis

... in treating glaucoma, in treating AIDS wasting syndrome and in alleviating the side effects of cancer chemotherapy ... There is a growing interest in the issue among the medical community, the general public and the media. In 1998, the Governments of two countries, the Netherlands and the United Kingdom, approved research projects in that area, in addition to research started earlier in the United States. (INCB 1999, para. 105)

The Board suggested that, when considering the possible medical uses of cannabis, governments should base their decisions on clear scientific and medical evidence and that to obtain reliable data, rather than anecdotal evidence, sound scientific research into the possible therapeutic properties and medical uses of cannabis should be undertaken.

In the Australian context, several respondents to the Bureau’s questionnaire expressed concern about the harms associated with cannabis use. Representatives of the New South Wales Department of Health in Port Macquarie reported that there is a need for research into the prevalence and extent of cannabis use by second- and third-generation cannabis users and into links between cannabis use and depression. Police Services in New South Wales and Victoria expressed concern about the health of cannabis users, particularly in relation to the practice of smoking heroin mixed with cannabis. They, and the Queensland Police Service, also raised the question of smoking amphetamines mixed with cannabis. McKetin et al. noted, ‘In Sydney, key informants reported a continuing trend for heroin use (particularly smoking heroin) among cannabis users’ (1999, p. 23).

## Conclusions

The total weight of cannabis detections at the Customs border increased marginally in 1998–99, to 52.06 kilograms from 38.4 kilograms in 1997–98. This is in contrast to 1996–97, when several large importations were detected, bringing the total weight seized at the Customs border to 24.29 tonnes. There have been no multi-tonne cannabis Customs border detections since 1996–97. It is highly likely that this is a direct result of joint operations conducted by the Australian Federal Police and Customs during 1996–97, when two major international cannabis importation syndicates were dismantled or severely disrupted.

The trend towards hydroponic cannabis production, identified in recent years, continued in 1998–99, there being an increased number of such detections in the majority of States and Territories. Domestically produced hydroponic cannabis has a growing share of the market, and the perception that it is higher in THC has helped to increase demand for it.

Recent household surveys show that demand for cannabis head is also increasing but that use of resin and oil is very low and declining.

Outdoor cannabis production decreased during 1998–99, partly because of the increase in hydroponic cultivation and partly because of the perception that it is easier for law enforcement agencies to detect outdoor crops. Outdoor cannabis crops are becoming smaller but interspersed over wider areas: rather than one large crop, cultivators are spreading their risk and sowing four to five small crops over a larger area.

Decriminalisation<sup>2</sup> of the possession of minor amounts of cannabis in South Australia has resulted in an increase in cannabis exports to jurisdictions where such decriminalisation has not occurred. Even with recent amendments to the regulations under South Australia's *Controlled Substances Act 1984*—reducing from 10 to three the number of cannabis plants subject to expiation—the trend towards greater syndication in that State suggests that there will be little reduction in the supply of South Australian cannabis. Law enforcement agencies reported that South Australian cannabis has been detected in major cities, regional centres and remote locations in Queensland, New South Wales and Victoria.

In Australia in 1998–99 cannabis offences constituted 69.6 per cent of all reported drug-related arrests—including arrests relating to heroin, amphetamine-type substances, cocaine, and other drugs such as steroids and hallucinogens. This represents a decline of 7.3 per cent on the proportion for 1997–98.

Cannabis offences (including arrests and infringement notices) declined nationally, by 10.1 per cent on the 1997–98 level. Western Australia has recorded a significant decline, of 47 per cent, in the number of reported cannabis offences since 1997–98—a contributing factor is thought to be the Cannabis Cautioning System being trialled in two police districts.

The number of cannabis infringement notices issued in South Australia and the Australian Capital Territory continued to decrease, particularly in South Australia, where the notices were issued mainly for consumer offences. The decrease in cannabis offences is thought to be partly a result of the redirection of police resources away from minor cannabis offences to other illicit drugs.

Prices for cannabis and cannabis resin have remained relatively stable but, because of the improving quality of cannabis 'head' and hydroponic cannabis, there has been a decrease in the demand for, and consequently the price of, cannabis leaf. Consumers are becoming accustomed to more potent cannabis and cultivators are producing and marketing their product accordingly.

As reportedly potent cannabis strains are likely to become more widely available, research will be necessary to determine both their impacts on users' health and the implications for public safety.

## Outlook

Amendments to regulations under South Australia's *Controlled Substances Act 1984*—reducing from 10 to three the number of cannabis plants subject to expiation—may not decrease the amount of cannabis exported to other States and Territories. In South Australia syndicated cannabis-cultivating groups will probably continue to operate, with increasing numbers of networked cultivation sites.

With a strong and growing demand for hydroponically cultivated cannabis in Australia, the monetary incentive to continue to distribute South Australian cannabis products will remain. If legislative efforts to reduce local production of cannabis were successful, the per-gram price could rise, encouraging further involvement by organised criminal groups.

On the basis of current trends, use of cannabis in Australia will continue to increase, mainly among the younger age groups.

## Notes

<sup>1</sup> This means the country nominated as the point of embarkation for the detected cannabis.

<sup>2</sup> The term decriminalisation does not equate to legalisation. Decriminalisation removes the possibility of receiving a criminal conviction for minor cannabis offences.

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