

Do the numbers add up?: Reported value of cannabis seizures.

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Background

- In mid 2008 NSW Police executed a number of raids on properties in Sydney's south west, uncovering a number of hydroponic cannabis 'factories'. This led to the seizure of many hundreds of cannabis plants.



Background

- The raids were accompanied by a large amount of news media attention.
 - Often highlighted in news reports was the dollar value of these seizures.
- Drug seizures of all types are generally accompanied by an estimate of the dollar value when reported in the news.
 - The value of drugs seized has also been used by law enforcement as a surrogate measure for the economic harm associated with drug use (AFP 2002).
- But are these values accurate in the case of cannabis plants?

Method

- Collect news reports published between April and June 2008, which included an estimate of the value of a particular seizure of cannabis plants (reported estimate).
- Compare the reported estimates with our own estimates, constructed using data on cannabis yield and price taken from research literature.

Results

- 42 articles found in SMH and Daily Telegraph, using search string '(cannabis or marijuana) and plant*' (*Factiva* database)
- 8 of these covered a cannabis seizure and mentioned a dollar value.
- 4 were excluded as the estimate was not firm:
 - 'The two latest raids on houses netted almost 500 cannabis plants worth about \$2.2 million' - *Daily Telegraph*, 16 May 2008

Our estimate(s)

- Value of a cannabis plant =
yield per plant (grams) * \$ per gram
- Yield per plant:
 - Bouchard (2007): 25.5g (crop > 100 plants)
36.9g (crop < 100 plants)
 - Toonen et. al. (2006) : 33.7g (median crop 259 plants)
- Price ('Street level'):
 - 2007 NSW IDRS: Cannabis price median \$20,
range \$10 to \$30

Results

Newspaper	Date	Article	News estimate		Research estimate		
			Plants	Value	Low Yield=25.5g/plant Price=\$10/g	Middle Yield=33.7g/plant Price=\$20/g	High Yield=36.9g/plant Price=\$30/g
Daily Telegraph	15 May 08	'Charges laid after cannabis crop raid'	350	\$1.5 million	\$89,250	\$235,900	\$387,450
Daily Telegraph	12 Jun 08	Police raid on house of secrets - Tip-off from the public	337	\$1.6 million	\$85,935	\$227,138	\$373,059
Daily Telegraph	20 Jun 08	Explosion in secret drug labs - Fifteen suburban houses raided in recent weeks	110	\$550,000	\$28,050	\$74,140	\$121,770

Results

- Estimated values between 4 and 20 times smaller than reported values.
- Per plant:
 - Estimated value: \$255 - \$1,107
 - Reported value: \$4,286 - \$5,000
- If the reported values are accurate, then plants would need to yield around 240 grams, OR cannabis would have to sell at between \$128 and \$186 per gram.

Discussion

- Small sample of articles
 - Excluded articles contained similar figures.
 - Reports of estimated plant value appear roughly consistent with U.S. newspapers, between \$US 3000 and \$US5000 per plant. (Gettman 2006).
- Further questions:
 - Who provides the reported values: media or police?
 - Why might there be such a large discrepancy between the reported values and our estimates?

Source of reported estimates?

NSW Police Media Release – 2nd
September 2009

Police have seized 225 cannabis plants during a raid this morning on a drug house at West Pennant Hills in Sydney.

Just after 8.30am, officers from The Hills Local Area Command executed a search warrant on the two-storey, weatherboard home in Oakes Road.

When they entered the house, they allegedly discovered cannabis plants in several rooms.

Police allege the house was dedicated to the enhanced, indoor cultivation of cannabis, with officers locating a number of hidden cavities.

The plants were being maintained using sophisticated watering and high-powered lighting systems.

The plants have an estimated, potential street value of \$450,000.

Daily Telegraph – 3rd September 2009

'Cannabis seized in raid'

POLICE yesterday seized 225 cannabis plants worth \$450,000 when they raided a suburban house dedicated to growing the plants using a hi-tech hydroponic system.

Officers raided the two-storey, weatherboard home in Oakes Rd, West Pennant Hills, just after 8.30am.

They allegedly discovered cannabis plants growing in several rooms, maintained using sophisticated watering and high-powered lighting systems.

"Police allege that the house was dedicated to the enhanced, indoor cultivation of **cannabis** ... locating a number of hidden cavities," police said. **"The plants have an estimated potential street value of \$450,000."**

ACC Illicit Drug Data Report 2007/2008



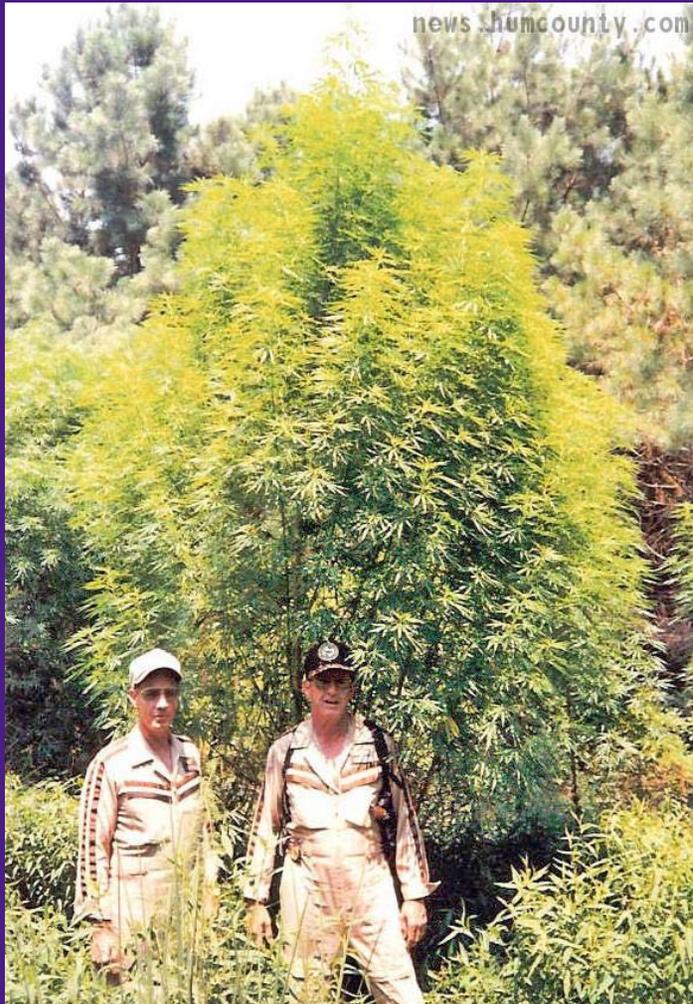
Jurisdiction	Mature plant	1 Pound hydro (454g)
NSW	\$5,000	\$3,500-\$5,000
VIC	N/A	N/A
QLD	\$5,000	\$4,500
SA	N/A	\$2,600-\$3,200
WA	\$2,000 - \$4,000	\$4,000-\$5,000
TAS	\$3,000	\$3,000-\$5,000
NT	N/A	\$3,500-\$4,500
ACT	\$2,000 - \$2,500	\$2,500-\$5,000



Why the difference?

- Inaccurate measure of plant yield may be the most likely reason for the inconsistency.
- U.S. Drug Availability Steering Committee (2002) used estimated plant yields of 200g, 448g and 1kg in their calculations of cannabis availability.
- Interviews with growers in the UK found that yields varied from 7g to 283g per plant; indoor grown plants could 'hardly compete' with outdoor plants (Hough et. al. 2003).

Why the difference?



It is possible that when making calculations, law enforcement authorities have used a yield figure based on outdoor plants.

Other factors

- Weighing of plants?
 - May include roots or other material of the plant that is not useable, or before it has dried.
 - Stems make up 43% of the dry weight of outdoor plants (DEA 1992).
- Multiple harvest from a single plant?
 - Cannabis is an annual plant with a limited lifespan, and potential for multiple harvests is low.
 - When harvesting, commercial growers cut the entire plant from the roots and hang to dry.
- Male/female plants
 - Presumption that all male plants have been removed.

Conclusions

- Reports of cannabis plant seizures appear to over-estimate the value of these seizures.
- Estimates appear to come from law enforcement authorities and not journalists/editors.
- The reason for any inaccuracy is likely to be caused by the high variability in plant yields.

Conclusions

- It is likely that the higher the value of the seizure, the better the story, but...
- Continuous over-estimation of the value of cannabis crops could:
 - Promote incorrect perceptions about the impact of law enforcement interventions such as drug seizures.
 - Provide us with a false sense of the size or profitability of the cannabis market.

References

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The End

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