### Part B: Selected issues

# 11. Cannabis markets and production. The cannabis market in France: between resin imports and home grown herbal cannabis

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## **Summary**

The French market for cannabis is experiencing changes typical of a maturing market. The entry of new competitors, product diversification, price variations and quality improvements all bear witness to this. In addition to highlighting the changes in the French cannabis market and more generally in the THC<sup>51</sup> market, this document discusses the implications of such changes for the traditional supply system and the methods and resources deployed to combat drug use.

#### 11.1. Introduction

Although the hashish club of the mid 19th century (comprised among others of Charles Baudelaire, Gérard De Nerval and Théophile Gautier) attracted a great deal of attention, we know virtually nothing of the period during which cannabis first began to be distributed widely, a period generally placed around the 1950s and 1960s (Yvorel J.-J. 2006). Between the 1850s and the 1950s, cannabis barely got a mention in France. Only the law of July 12, 1916 explicitly referred to cannabis, introducing a ban on the use of toxic substances such as opium or cocaine. To demonstrate the extent to which cannabis was eclipsed by other products, we should note that between 1920 and 1922, the Paris vice squad seized 100 kilograms of cocaine, more than 50 kilograms of opium and just 5 grams of cannabis (Yvorel J.-J. 2006). This lack of knowledge of the growing consumption of cannabis possibly explains why the law of 1970 banning the use of narcotics in France and particularly targeting heroin, was so severely savaged in the media at that time regarding cannabis use (Lefebvre T. 2006; Adès J.-E. and Gandilhon M. 2007)

However, the reality of today's cannabis market, which certainly has nothing in common with that of the 1950s, 60s or even the 70s, is much better understood and currently appears to be undergoing change. Firstly, we know (as this is now measured) that demand is strong and that the supply-side is in a position to meet this demand (or vice versa). Secondly, new cannabis products are appearing, or at least products which differ in terms of both origin and quality from the Moroccan resin which has dominated the French market since the 1960s, with an example being home grown herbal cannabis.

These changes make it necessary for observers to take note of the newly evolved cannabis market, and more precisely to highlight the importance of the new products and new participants in this market, not forgetting the impact of all of this on traditional cannabis resin distributors. This is necessary in order to be able to give careful thought to the future of the fight against the THC market in France.

As a response to this problem, the cannabis market is described in the first section, with a classic assessment of demand, supply and price. In the second section, we highlight evidence of changes in the French cannabis market. Not only are we seeing the nationwide spread of shops specialising in the sale of the equipment needed to grow cannabis, but seizures of plants (sometimes cultivated

<sup>&</sup>lt;sup>51</sup> THC: tetrahydrocannabinol, and more precisely Delta9 tetrahydrocannabinol is the key active psychotropic substance found in cannabis.

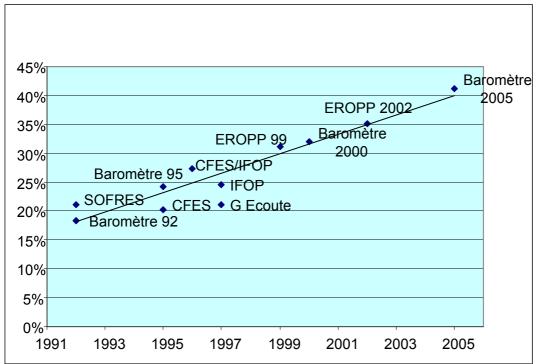
intensively) are rising. Finally, in the third and final section, the implications of these changes will be discussed both from the viewpoint of the cannabis resin importers and from that of the security forces in charge of the fight against drug use.

#### 11.2. The cannabis market in France

As with any Marshallian<sup>52</sup> view of the marketplace, the cannabis market can be assessed based on three aspects: demand, supply and finally the price and quantity resulting from these.

Demand has doubled in 15 years but has remained stable since 2005.

When we analyse the demand aspect of the French cannabis market, we can see that this has expanded significantly since the early 1990s, if we refer to the general population surveys documenting the prevalence levels (Graph 11-1).



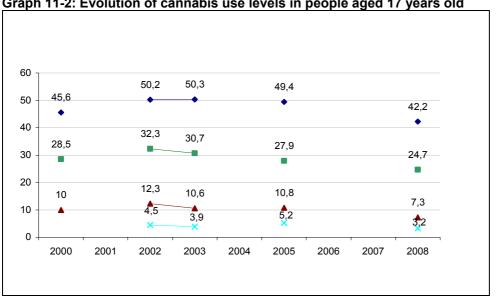
Graph 11-1: Lifetime cannabis use prevalence in the 18-44 years old age group

In the early 1990s, around 20% of French people aged between 18 and 44 declared they had already used cannabis. This figure had virtually doubled by 2005.

Thus, demand for cannabis intensified in the 1990s and since the early 2000s. However, we are today witnessing stagnation or even a slight decline in demand particularly among young people, as suggested by Graph 11-2.

<sup>52</sup> The Marshallian vision of the market is traditionally represented by a supply curb intersecting with a demand curb, consequently establishing the prices and the quantities traded in the market.

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Graph 11-2: Evolution of cannabis use levels in people aged 17 years old

A consumption peak appears to have been reached in 2003. Since then, we have seen a slight decline in consumption levels for all categories of consumers. Demand appears to be falling but we will need to wait for the next major general population survey in 2010 in order to be able to confirm this trend.

In addition to prevalence, young people's perceptions of access to the product are also revealing a slight decline for cannabis, and accordingly a slight contraction of the cannabis market. Thus, the perceived accessibility of cannabis has been the subject of two contradictory changes between 1999 and 2007: firstly, it appeared to be easier to obtain cannabis in 2003 than in 1999 (with fewer people considering this "impossible" and more people claiming that it is "easy"), although this trend was then completely turned on its head with the emergence of a situation similar to that of 1999 (with fewer people claiming that it is "easy" to obtain and more people considering it "impossible") (Legleye S., Spilka S. et al. in press).

The other major change is a significant increase in the percentage of young people unable to answer this last question, which doubled between 2003 and 2007, probably because cannabis consumption has fallen, with the result being that it is now less visible and consequently less available.

This appears to be all the more likely as cannabis is chiefly obtained from among the individual's circle of friends. Among regular consumers, 78% stated that they obtain their cannabis from friends and 65% are given it free of charge, while 59% of users stated that they purchase it from smallscale dealers. For the latter, the favoured location of the transaction is the dealer's apartment. Carrying out the transaction in the dealer's home reduces the risk of arrest both for the dealer and the purchaser. Additionally, for the latter, buying from a dealer creates the impression of belonging to a circle of "select" clients (BELLO, TOUFIK et al. 2005) and encourages a feeling of "trust" which is influential during transactions.

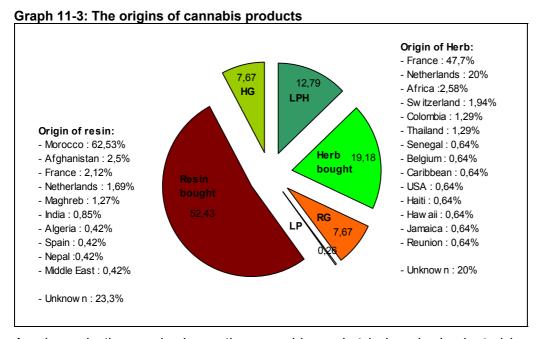
Finally, even if demand for cannabis appears to be declining slightly, the fact nevertheless remains that in 2005 almost 12 million French people had already experimented with cannabis<sup>53</sup>, of whom 3.9 million were occasional consumers and 1.2 million regular consumers, with 550,000 taking cannabis on a daily basis (BECK, LEGLEYE et al. 2006).

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<sup>&</sup>lt;sup>53</sup> As a comparison, the number of consumers experimenting with cocaine is estimated at 1.1 million, with ecstasy at 900,000 and with heroin at 360,000 (Beck et al., 2006).

# 11.3. A supply side historically based around the importation of Moroccan resin

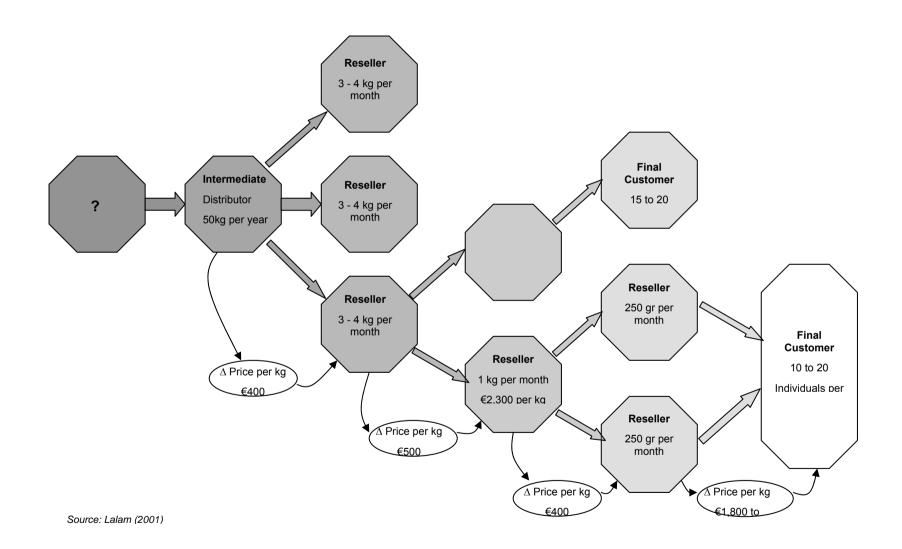
The cannabis seized by the security forces in France, whether herbal cannabis or resin, originates from various parts of the world and is intended for various final destinations such as the UK for example. Although France is a transit country for cannabis resin and herbal cannabis, it is also obviously a final destination country too (Tables B, C, D and E in the Appendix). The cannabis consumed in France is logically mainly obtained through importation. A survey carried out among 400 regular cannabis users in which they were asked to state the geographical origin of their products confirmed that cannabis resin originates from Morocco while the herbal cannabis comes from the Netherlands... and from France. Graph 11-3 below shows the geographical breakdown stated by users for herbal cannabis and resin.<sup>54</sup> This graph also shows the breakdown in percentage terms of the products according to whether they are purchased, supplied free of charge or home-grown.



As shown in the graph above, the cannabis market is largely dominated by resin imported from Morocco. The imports of cannabis resin mainly arrive by road. The traffickers load their cargo on the southern coasts of Spain and then make their way to France in high speed, large engine vehicles ("go fasts") while discreetly blending in with the road traffic among more basic "go slow" vehicles, indistinguishable from the rest. The importation of cannabis by road is also carried out using heavy goods vehicles, camping cars or coaches (OCRTIS (Office central pour la répression du trafic illicite de stupéfiants) 2008). Once imported into France, the cannabis resin is marketed by means of a distribution system of varying degrees of complexity. This cannabis distribution system was described for the first time thanks to ethnographic studies performed during the 1990s. Lalam (Lalam N. 2001) has refined and summarised this acquired knowledge, with a description of a general commercial distribution system for cannabis in France, as shown in Figure 1.

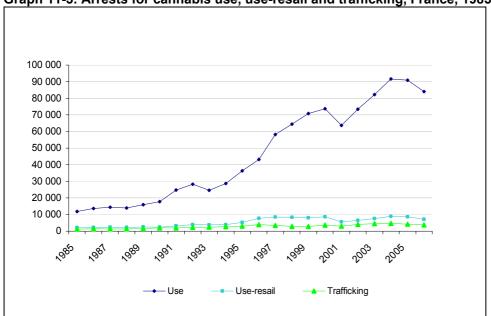
<sup>&</sup>lt;sup>54</sup> In Graph 3, HG stands for Herb Gifted; LPH: Locally-Produced-Herb; RG; Resin-Gifted; LP: Locally-Produced Resin.

**Graph 11-4: Cannabis distribution network** 



This system includes four different distribution levels. We should note that there is no description of the importation method and that this system begins with the semi-wholesaler ranging down to the final end user. The profit margins related to the progression from wholesale to retail sales are shown in the figure.

We should also note in Graph 11-5 that the probability of arrest is far higher for simple users of cannabis than for user-resellers and even for traffickers. This idea is obviously borne out when we consider the number of seizures performed according to the weight of cannabis seized: in 2007, just under 47,000 seizures of less than 5 grams were carried out compared to 400 seizures of between 1 and 5 kilograms or 30 seizures of between 100 and 500 kilograms (Appendix, Table A).



Graph 11-5: Arrests for cannabis use, use-resail and trafficking, France, 1985-2007

Cannabis trafficking can therefore appear to be a relatively risk-free and lucrative activity for cannabis traffickers in France. On this particular point, thanks to a methodology combining ethnographic observations and mathematical-economic modelling, Ben Lakhdar (BEN LAKHDAR 2007) has estimated the number of semi-wholesalers (i.e. those distributing between 140 and 300 kilograms of cannabis per year) at between 700 and 1,500. The latter individually generate an annual turnover of between 250,000 and 550,000 Euros. Further down this distribution chain as described by Lalam (2001), the second intermediary earns between 35,000 and 77,000 Euros per year. He sells between 16 and 35 kilograms annually. At this stage in the distribution chain, there are estimated to be between 6,000 and 13,000 dealers. The third and fourth intermediaries earn much smaller sums (less than 10,000 Euros per year). There are on average 85,000 third level intermediaries while the number of final intermediaries is estimated at 140,000 individuals. At these levels of the distribution chain, the quantities sold are below 4 kilograms per year.

To sum up, with around 208 tonnes of cannabis sold each year, generating a retail sales turnover of 832 million Euros (Legleye S., Ben Lakhdar C. et al. (2008), cannabis supply seems to be doing well in France.

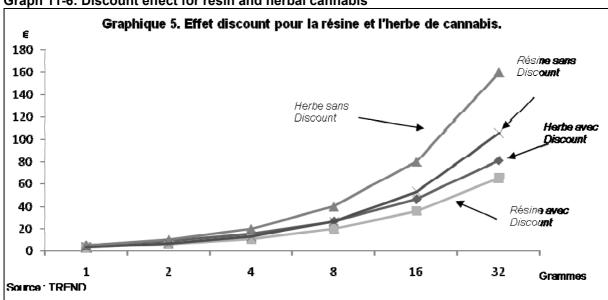
#### 11.4. Two key variables, the price-quality and price-quantity relationships

The price-quality relationship for illegal drugs is a vital factor when studying these markets and the manner in which they are developing (Caulkins J. and Padman R. 1993). Indeed, although the price of a product may fall, leading us to believe that supply is rising, this fall may in fact be due to a reduction in the intrinsic quality of the product in terms of pure psychoactive substances. In such a scenario, the price reductions are not the outward sign of

the greater availability of the product but rather of stagnation in the price per gram of the pure psychoactive substance concerned.

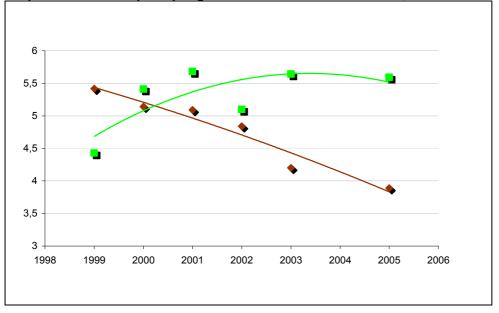
Naturally, quality is not the only factor affecting price levels. The quantity purchased in a single batch must also be taken into account. A discount effect exists when illegal drugs are purchased in bulk. In other words, the higher the quantity purchased, the lower the price per gram. This discount effect is a response to the need to limit stocks and thereby to reduce the risks of the seller encountering problems with the authorities. Traffickers seeking to dispose of their cannabis as quickly as possible thus attempt to motivate buyers by reducing prices according to the quantities purchased.

Where cannabis (resin and herbal cannabis) is concerned, it has also been shown that the price-quantity index for cannabis resin is 0.823 and 0.845 for herbal cannabis (BEN LAKHDAR 2007). In other terms, when the quantity of resin purchased doubles, the price does not increase by 100% (i.e. doubling) but by 82.3%. This discount effect can be seen in Graph 5 below.



Graph 11-6: Discount effect for resin and herbal cannabis

If we consider the price per gram of the resin and herbal cannabis sold in France (Graph 11-6), we see major changes occurring over the period 1999-2005. The average price per gram of cannabis resin fell sharply over the period in question while the price per gram of herbal cannabis increased.



Graph 11-7: Medium price per gram of cannabis resin and herb, France 1999-2005 (retail)

Over the same period, the quality of the cannabis products also changed, chiefly for herbal cannabis. Indeed, the concentration of THC rose for herbal cannabis, increasing from roughly 5% in 1998 to 7 or 8% in 2004 (BELLO, TOUFIK et al. 2005). At the same time, the average THC content for cannabis resin of around 10% remained at this level over the period from 1998 to 2004.

Consequently, we may conclude that only the resin market has changed significantly.

As the price of herbal cannabis has increased in line with improvements in its quality, we may consider that the price per gram of pure THC has not significantly changed for this type of product, unlike resin, for which the price has fallen while the THC content has remained identical. Thus, the price per gram of resin-based THC has fallen while the price per gram of herbal cannabis-based THC has remained stable.

Based on the above, to explain the significant fall in the price of resin-based THC we may assume that the rise in the popularity of herbal cannabis, and above all its attraction for consumers due to its high quality, has led resin sellers to lower their prices in order to ensure that their product continues to remain competitive faced with this high-quality competitor. This hypothesis therefore suggests the existence of competition between these two products, products which are also in the hands of very different market players.

This hypothesis is backed by a number of signs.

#### 11.5. Signs of change

As shown by Jansen's analysis (Jansen A.C.M. 2002), Europe has the potential to become self-sufficient in cannabis production, and no longer dependent upon imports. More precisely, according to Jansen (2002), thanks to the illegal use of the latest technological innovations, it is now possible to use intensive farming methods for cannabis, circumventing climatic constraints. These technical developments and greater access to the knowledge and skills required mean that Europe now has the possibility to produce its own cannabis. As the Internet provides access not only to the knowledge required in order to grow cannabis but also to the tools and resources needed (through online sales) to cultivate and boost the efficiency of cannabis production, a number of European nations are now approaching self-sufficiency in the field of cannabis production. Switzerland and Great Britain are particularly striking examples (EKDF 1999; Druglink March/April, 2007).

The Internet is not the only source of access to the material needed to grow cannabis. Shops exist specialising in indoor growing, clearly dedicated to cannabis production. Additionally,

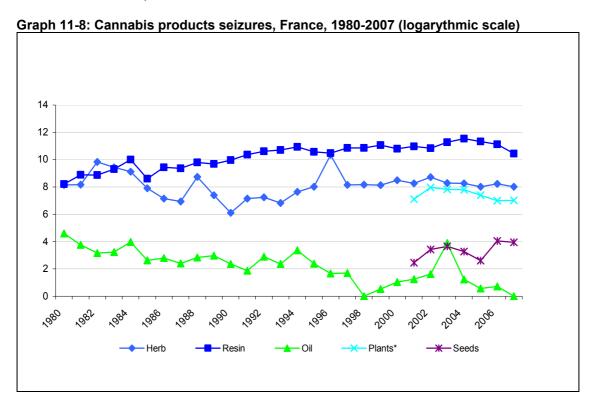
we have seen a worrying correlation between the number of these specialised shops and the number of arrests for cannabis growing in Canada (Brochu S., Beauregard V. et al. 2008; Bouchard M. and Dion C.B. 2009). In France, the number of such shops was estimated at between 60 and 197 in 2005-2006 (Lefour J. 2006; TOUFIK, Legleye et al. 2007). More recent estimates mention between 200 and 400 growshops in 2008. Furthermore, when we examine this type of business in detail we discover geographical variations which appear to show that the demand for this type of equipment is concentrated in the suburbs of major cities.

Some of the shops, referred to as head shops, also sometimes sell hemp seed in various forms including packets from seed producers in the Netherlands such as the sensiseed bank, or seed referred to as hemp seed (birdseed). However, although it is not illegal to sell indoor growing equipment (as this can be used for perfectly legal purposes) the sale of seed is tightly regulated.

Since these factors of production are now available to large numbers of people, the domestic production of cannabis is no longer a marginal activity. In a total market estimated at 277 tonnes of cannabis consumed in 2005, of which 208 were marketed, generating 832 million Euros in turnover (Legleye, Ben Lakhdar et al. 2008), at least 32 tonnes were produced in France (BEN LAKHDAR 2009).

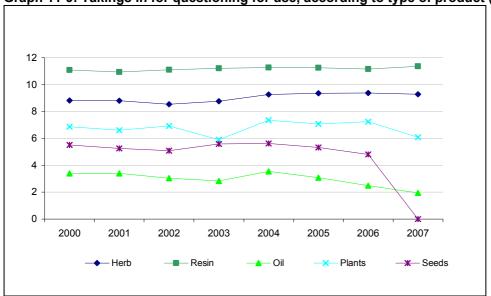
This estimate of 32 tonnes means that we can estimate the market share for self-grown cannabis at 11.5% of the total market. In value terms, this would account for 160 million Euros, enabling us to estimate the number of plants harvested annually at between 950,000 and 1.3 million. Due to the methodology used, only "small-scale" growers are taken into consideration here, each growing between 6.8 and 9.3 plants if we consider the total number of self-growers at between 140,000 and 200,000 (TOUFIK, Legleye et al. 2007).

In Graph 11-8, we should note that the problem of the self-production of cannabis has been featured in police statistics since 2001 as it was from this year onwards that seizures of cannabis seed and plants were recorded.



Based on the assumption that a cannabis plant produces 30 grams of flowering tops<sup>55</sup> (Toonen M., Ribot S. et al. 2006), seizures of cannabis plants in France are below the level of seizures of herbal cannabis. Naturally, among the seizures of herbal cannabis, part of this quantity originated in France. Ultimately therefore, it is impossible to say whether the herbal cannabis seized chiefly originated in France or abroad. It should be borne in mind however that users state that the herbal cannabis they consume is mainly produced in France (Graph 11-3). The fact nevertheless remains that the majority of seizures in France are for cannabis resin. Seizures for oil are becoming ever rarer.

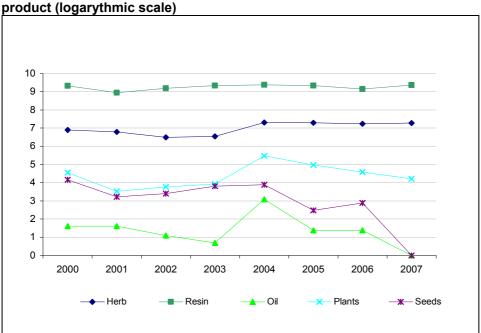
Regarding the production sites for the plants seized, we may assume that the cannabis plants seized come from plantations of various sizes. Bouchard (Bouchard M. 2007) has effectively shown for Canada that the risk of discovery is greater for large plantations than for small ones, but that despite this the small-scale growers tend to be arrested more often than the larger ones. We can consequently assume that the seizures are comprised of plants from larger plantations while the arrestees tend to be small-scale producers.



Graph 11-9: Takings in for questioning for use, according to type of product (logarithmic scale)

Similarly, the users, user-resellers and traffickers arrested are mainly arrested for the possession of resin, followed by that of herbal cannabis and finally cannabis plants (Graphs 11-8 and 11-9).

<sup>55</sup> This is a high-end assumption as Toonen et al. (2006) have estimated the yield from a plant under virtually optimal production conditions (indoor hydroponics).



Graph 11-10: Takings in for questioning for use-resail and trafficking according to type of

With 1,583 cannabis plantations discovered in 2007 and 2,106 dismantled in 2008, the number of cases involving cannabis growing increased by a third in just a year. However, these cases remain marginal as they account for less than 2% of all cases centralised by the OCRTIS (Central Office for the Repression of Drug Trafficking).

In 2007, the security forces (the Police, Gendarmerie and Customs Department) brought cases against 1,950 individuals, of whom only a quarter were prosecuted for the possession of cannabis plants, the others being accused of other offences. This data also shows that most cannabis growers were prosecuted for offences other than cannabis growing: the discovery of the plants occurred during searches carried out for other offences (most of which were drug-related, but also other types of offences including armed robbery, possession of stolen goods, etc.).

The 450 people sentenced for the possession of cannabis plants in 2007 were mostly labelled as "users". Despite the fact that the penal code categorises this type of offence as a crime, the courts can punish cannabis growing based on the circumstances, i.e. by taking account of the personal situations and intentions of those brought before the court.

Although outdoor growing is frequently encountered in the French overseas departments and in the south of France, indoor growing clearly predominates. According to the data supplied by the OCRTIS, this growing method accounts for 3 cases out of 4. This change can be explained by a number of factors including an increasingly urban population, easier access to the knowledge and equipment required, greater discretion than outdoor growing and above all a method making it possible to grow reputedly high-quality cannabis (with more flowering tops per plants and more THC).

Most discoveries of cannabis plants are modest in size. For instance, 50% of the plantations discovered in 2007 by the security forces did not exceed 5 cannabis plants and only 10% exceeded 50 plants (Office central pour la répression du trafic illicite des stupéfiants (OCRTIS) 2007). This data alone means that we can presuppose that the vast majority of cannabis growers grow herbal cannabis for their own consumption. According to estimates by Toonen et al. (2006) who have assessed the average production of cannabis indoors, 5 plants make it possible to produce 150 g of herbal cannabis per harvest, i.e. a maximum of 600 g for four harvests per year (or the equivalent of 1.6 g per day).

These small-scale cannabis growers prefer to join forces when growing cannabis. As this activity requires time, not to mention a fairly hefty initial investment (between 300 and 1,000 Euros for an indoor plantation of 5 to 10 plants), it is frequently found that a couple or a group of friends pool their money and spare time to grow the plants. Furthermore, the younger the cannabis growers are, the higher their propensity to grow the plants as a group. These cannabis growers, who have been referred to as "social cannabis growers" (INHES-MILDT 2009), produce more than they consume and tend to be motivated more by the feeling of belonging to a group, in addition to the challenge and the possibility of saving money, rather than by the prospect of personal enrichment. Giving or swapping cannabis has become the norm among these individuals, although some may decide to try and offset the cultivation costs and sometimes to earn a little money.

A comparison of the socio-demographic and legal data for these cannabis growers confirms that the vast majority of cannabis growers have no relationship whatsoever with the organised crime networks involved in cannabis trafficking. The cannabis growers arrested are older and socially better integrated (they are often employed, with virtually no criminal record) than cannabis traffickers. This qualitative data has emerged in a context in which a majority of magistrates tend to view most cannabis growers as being "less dangerous than the traffickers".

Additionally, analyses of the available statistics also suggest that large-scale cannabis plantations tend to be rare. Only around 10 of the dismantled plantations exceeded 500 plants in 2007, these being outdoor plantations created in French Polynesia. This modest size of the plantations is all the more striking when we compare them to the size of the cannabis factories discovered in the United Kingdom and the Netherlands, which can include several thousand plants per site.

However, the most recent trends appear to show a non-negligible change in the number of plantations operating for financial gain. The security forces dismantled 34% more plantations in 2008, and tore up more than twice as many plants as the previous year. This rise chiefly concerns plantations of more than 50 plants and appears to indicate a degree of professionalization creeping in for certain cannabis growers. These French cannabis factories rarely exceed 250 plants. Approximately 10 sites with more than 250 plants are discovered each year and in 9 cases out of 10 these are in French Polynesia.

Among these rare sites, we encounter organised groups, although we cannot link these groups to the "traditional networks". Nevertheless, they display an operating method resembling the methods used by British and Dutch organised groups, namely a network boss who finances and organises the plantation <sup>56</sup>, followed by a front man who rents the premises, often on the edge of a major city, and who handles the work necessary to setting up the plantation (a growing room with lighting and irrigation systems, a drying facility and another intended for propagation via cuttings - the best plants are selected and then cloned from a cutting guaranteeing better results than those achieved with seed).

At this stage, it is by no means unusual to discover the involvement of an expert, who may sometimes be a biology student recruited by the plantation boss, although he may also be a specialist (frequently from Holland) renting out his services to different cannabis growers.

Finally, the network boss recruits a gardener to handle the day-to-day upkeep of the plants. As he is the person most at risk of arrest, this gardener has very little contact with the rest of the team. He communicates with only a single member of the team and has no knowledge of the distribution chain as a whole. We should note that in contrast with the observations carried out in France, criminal groups in the Netherlands and the UK tend to recruit

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 $<sup>^{56}</sup>$  The financing generally exceeds 20,000 euros (for 200 plants) which in theory will be recovered with the proceeds from the first harvest.

gardeners from among illegal immigrants who do not speak the language. Highly vulnerable, they often pay for their journey to Western Europe by carrying out these gardening activities.

Information gathered by the security forces confirms that cannabis growing is gradually gaining ground within the cannabis market. These growing activities tend to be fragmented (i.e. large numbers of small plantations), located close to demand (on the edge of major cities) and corresponds to the changing needs of consumers (who are seeking herbal cannabis with a high THC content), unconnected with the traditional, dangerous resin supply networks.

#### 11.6. Supply-side implications

The emergence of herbal cannabis produced in France constitutes a new source of supply within the THC market. The market for resin is believed to be facing competition from the market for herbal cannabis - itself divided between commercially produced herbal cannabis (whether imported or produced in France) and self-grown herbal cannabis. Taken together, all of these factors comprise the THC market. For several years we have been witnessing the increased segmentation of this market, with one group lowering the price of their products (resin) while the others opt for higher quality (herbal cannabis). However, it appears that part of the self-grown herbal cannabis is grown precisely in order to avoid the "commercial" market for THC and to achieve greater control over the quality of the product consumed (Lefour J. 2006). This is true for grower-users, i.e. those who in principle have no commercial ambitions when growing their cannabis.

The current ease with which local production can be carried out does not only concern "small-scale" growers. Other countries (the USA, Canada and the UK) have seen criminal networks setting up, specializing in the indoor production of cannabis. The criminals' skills differ between the specialist in the importation of narcotics and the specialist in the large-scale production of herbal cannabis. Could they be the same individuals in France, who have made the transition from one activity to the other in order to meet demand and to protect their market share? Currently, we cannot answer this question with any degree of precision, although it appears that this is not the case. Firstly, organised crime concerning this particular criminal niche is still in its infancy in France, and secondly we have recently noted that the criminal networks specializing in the importation of cannabis are diversifying their product range by now importing cocaine (GANDILHON 2007).

Even if, at first sight, France is only marginally affected by these criminal organisations specialising in the production of herbal cannabis, the public authorities have fully appreciated the threat and are currently equipping the security forces with the tools they need to detect indoor growing, in addition to building awareness among them and providing them with training concerning this new source of drug supply (MILDT 2008).

Finally however, another key player has come along to further disrupt the traditional THC supply system. The online sale of synthetic cannabinoids over the Internet was still legal up until recently in France. The synthetic substances are now listed as narcotics and have been since February 2009. The fact nevertheless remains that in the THC market (natural or synthetic) this new source of supply continues to produce its effects as the producers are relatively unaffected by the actions taken by the authorities. The supplier is almost inevitably situated abroad and can only be located with great difficulty.

#### 11.7. Conclusion

Today, it can be said that the cannabis market in France is a market reaching maturity. Apart from the high level of demand being met, a number of factors point to the fact that cannabis, or more precisely the market for THC, has made the transition from a monopolistic market to a competitive market, benefitting from technical innovations, and experiencing price variations and the differentiation of products based on their quality.

As Jansen (2002) highlighted, the technical capacity and expertise which is now known to and available to the European countries mean that imported cannabis (chiefly from Morocco) now faces stiff competition. It is possible for all European countries and particularly France to boost their potential for cannabis production, and to eventually cease to be dependent upon imports.

The consequences for the THC market are numerous including falling prices for certain products, quality increases, and a wider range of products available including the appearance of innovative cannabinoidic products.

The economic model used by the traditional sellers of cannabis resin has also been thrown into turmoil. Their logical reaction faced with heightened competition from herbal cannabis (whether imported or produced locally) has been to cut their prices. It has also been (perhaps faced with the strong preference shown by consumers for herbal cannabis) to diversify their activities, using their skills in the field of the importation of illegal products to import cocaine instead (GANDILHON 2007).

The security forces have been encouraged to react: the 2008-2011 government plan to fight drug use stresses the need to combat the local production of cannabis. The security forces are being equipped with new detection equipment, and are building awareness among, and training their field staff in this new form of criminal activity. However, it appears that alongside this new form of obtaining THC, not only is the Internet proving to be a tough opponent in as far as suppliers go (concerning the sale of synthetic cannabinoids) but furthermore the former cannabis importation networks are now adding psychoactive substances to their range of available drugs.

# **Appendices**

Table 11-1: The structure of cannabis resin seizures (in weight) in 2007

Band	Quantity		Number of seizures	
< 5 gr	94,451 kg	0,28	47706	
6 to 20 gr	116,717 kg	0,34	11112	
21 to 50 gr	108,750 kg	0,32	3318	
51 to 100 gr	128,412 kg	0,38	1681	
101 to 500 gr	354,887 kg	1,04	1631	
501 to 1000 gr	267,001 kg	0,78	359	
1001 to 5000 gr	906,642 kg	2,65	403	
5001 to 10 000 gr	616,887 kg	1,8	83	
10 001 to 50 000 gr	2 569,754 kg	7,52	120	
50 001 to 100 000 gr	3 029,560 kg	8,86	41	
100 001 to 500 000 gr	9 277,789 kg	27,14	31	
500 001 to 2 000 000 gr	14 441,86 kg	42,25	14	
> 2 000 001 gr	2 270,000 kg	6,64	1	
Total	37 182,710 kg	100%	66500	

Source: OCRTIS

Table 11-2: The country of acquisition for cannabis resin seized in France (in Kg)

2002 2003 2004 2005 2006 2007

	2002	2003	2004	2005	2006	2007
South Africa	-	-	-	-	-	21,179
Algeria	11,924	2 147,960	192,845	499,753	205,755	387,596
Germany	-	1,039	-	30,260	5,053	-
Belgium	90,572	810,908	2 703,056	604,611	1 782,870	521,020
Brazil	-	-	-	-	-	2,800
Cameroon	-	-	-	-	-	14,696
Spain	38 077,214	52 422,202	55 578,179	61 026,360	41 547,854	19 475,693
France	92,254	530,276	826,203	740,205	603,060	536,960
India	-	-	-	-	-	7,600
Luxembourg	-	-	-	10,000	1,000	-
Morocco	3 341,226	10 872,474	18 402,803	10 551,495	8 264,012	6 559,114
Netherlands	803,688	626,996	1 169,281	1 306,288	558,276	431,531
Portugal	-	139,940	6 161,400	61,233	1,000	-
Surinam	-	-	-	1,953	-	-
Not stated	8 419,235	10 796,125	18 671,282	8 638,583	14 923,103	6 224,520
Total	50 836,113	78 347,920	103 705,049	83 470,741	67 891,983	34 182,709

Source: OCRTIS

Table 11-3: The destination country for cannabis resin seized in France (in Kg)

	2002	2003	2004	2005	2006	2007
Germany	1 691,899	2 137,394	45,052	3 849,845	5 064,040	3 368,250
Austria	-	-	-	70,160	-	13,278
Belgium	1 244,088	1 337,981	3 983,239	5 042,740	2 750,498	1 626,850
Denmark	374,320	306,664	35,000	24,480	569,700	217,160
Spain	14,350	6,700	0,361	93,000	3,565	2 983,900
France	10 791,500	23 503,542	21 452,598	12 423,511	13 346,839	10 337,069
Greece	-	-	486,000	30,260	3,180	-
Hungary	-	-	-	-	20,068	-
Ireland	1 914,000	2 070,338		4 563,152	1 048,630	1 596,025
Italy	6 096,543	5 523,328	6 684,775	3 973,482	3 755,413	3 065,367
Jersey (UK)	-	-	-	-	-	8,000
Lithuania	-	-	-	-	-	93,000
Netherlands	7 179,899	16 100,964	38 916,648	43 579,122	26 881,289	2 628,578
Poland	-	-	-	80,000	-	-
UK	17 159,630	21 389,322	19 753,523	4 763,448	4 099,126	4 168,399
Switzerland	17,598	32,000	-	38,975	1,230	-
Sweden	-	-	-	-	30,500	30,240
Not stated	4 352,286	5 642,687	12 347,853	4 938,566	10 317,905	4 046,594
Total	50 836,113	78 050,920	103 705,049	83 470,741	67 891,983	34 182,710

Source: OCRTIS

Table 11-4: The country of acquisition for herbal cannabis seized in France (in Kg)

2002	2003	2004	2005	2006	2007
-	-	-	-	22,371	39,950
65,700	23,000	-	-	-	80,900
1 186,764	255,826	331,693	112,057	438,850	98,428
9,260	-	10,500	5,207	5,042	-
-	-	69,930	37,000	62,618	113,005
271,370	24,000	26,000	-	-	-
-	55,500	-	-	126,600	
-	37,000	-	16,000	9,375	13,420
127,775	130,982	119,765	69,822	71,442	135,718
63,000	-	-	2,500	-	-
-	-	-	-	4,260	2,753
-	-	-	-	44,000	-
-	3,850	-	-	11,307	-
-	-	-	-	-	97,300
-	-	-	-	-	47,160
132,907	881,602	681,214	759,466	641,058	168,717
-	-	-	-	-	2,884
149,000	-	220,000	491,600	368,550	356,600
211,400	-	83,995	42,100	68,460	328,820
54,500	20,304	-	-	-	1,200
67,912	91,142	24,750	41,600	51,814	16,930
-	-	-	-	4,210	1,000
1 047,000	-	2,050	12,400	2,910	-
5,070	-	-	142,000	-	-
2 755,042	2 471,421	2 361,992	1 330,671	1 840,666	1 542,738
6 146,700	3 994,627	3 931,889	3 062,423	3 773,533	3 047,523
	- 65,700 1 186,764 9,260 - 271,370 - 127,775 63,000 132,907 - 149,000 211,400 54,500 67,912 - 1 047,000 5,070 2 755,042			-         -	22,371 65,700

Source: OCRTIS

Table 11-5: The destination country for herbal cannabis seized in France (in Kg)

	2002	2003	2004	2005	2006	2007
Germany	-	-	1,335	-	-	-
Anguilla	-	-	-	-	-	232,000
Barbados	-	-	-	491,600	-	-
Dominica	-	-	-	-	350,550	-
Spain	5,750	18,004	-	-	-	70,000
USA	-	-	-	-	-	10,000
France	2 292,624	800,680	903,707	1 026,010	1 126,571	1 580,838
Greece	-	-	10,339	-	-	-
Hungary	-	-	-	-	3,650	-
Mauritius	-	23,000	-	-	-	-
Ireland	-	-	-	-	2,775	83,892
Italy	21,954	16,300	31,331	19,681	184,173	8,324
Japan	-	1,767	-	8,114	-	-
Netherlands	10,840	1,272	220,000	-	18,000	6,700
UK	1 716,191	1 169,247	674,725	781,744	816,636	15,800
St-Vincent & Gr.	-	-	-	-	126,600	-
Slovenia	-	-	4,975	-	-	-
Taiwan	-	1,830	-	-	-	-
Not stated	2 099,341	1 962,527	2 085,477	735,274	1 144,575	1 039,969
Total	6 146,700	3 994,627	3 931,889	3 062,423	3 773,530	3 047,523

Source: OCRTIS