

Ed Rosenthal
1635 East 22nd Street
Oakland, CA 94606

Tel: (510) 533-0605
Fax: (510) 535-0437

018-94

March 7, 1994

United States Sentencing Commission
One Columbus Circle, NE, Suite 2-500 South Lobby
Washington, D.C. 20001

Dear Sirs/Mesdames,

For the past six years I have served as an expert on the subject of marijuana cultivation, intent and yield in both federal and state courts. Before that I studied the plant, cannabis, for over fifteen years. As a result of my study and research I have come to the conclusion that federal sentencing in marijuana cultivation cases is inappropriate and unjust. In addition it does not accomplish any of the purposes for which it has been promulgated.

I will discuss several aspects of the sentencing laws. First I will address botanical aspects of marijuana and its cultivation. Secondly, I will briefly cover some of the effects of present policies. Third, I will propose a reasonable set of sentencing policy alternatives. The fourth section covers long-term prospects for the marijuana laws.

BOTANICAL ASPECTS OF MARIJUANA CULTIVATION AS THEY RELATE TO SENTENCING

The Guidelines were created to develop a more uniform method of sentencing for offenses of equal magnitude. The Guidelines, as they pertain to marijuana cultivation do not accomplish this goal. Instead, they create a system of arbitrary and capricious punishment, not justice.

In order to have a clear understanding of the effects of the sentencing regulations as they affect marijuana growers it is helpful to have an understanding of marijuana's botany as it relates to yield, cultivation techniques, patterns of personal use and sales and intent.

Botanically, marijuana is considered a short day or long light plant. That means that its flowering cycle is triggered when the plant receives between 8-12 hours of uninterrupted darkness each evening. Two plants of the same variety, one a seedling and one a large, older plant will both flower at the same time if given the same long night regimen. One implication of this is that plants grown outdoors will flower at a given time during the season no matter what size they are.

Once the plants begin to flower, they stop new growth of branches and stem. Instead, all of the new growth consists of flowers in the male, which then dies, or the flowers of the unpollinated female. If the female remains unpollinated it continues to grow new

TO: United States Sentencing Commission
FROM: Ed Rosenthal

March 7, 1994

flowers which spread along the branches and develop into thick masses commonly called buds or colas. Should the female flowers be pollinated, which occurs through wind pollination in nature, the plant stops growing new flowers and instead devotes its energy to developing seeds.

Marijuana is a dioecious plant, there are separate male and female plants. Males make up half the population. The male is removed from the garden to prevent pollination of the females as soon as its sex is detected. The plant is discarded. If a garden is seized one day, the plant count might be much higher than the next day after males are removed.

Marijuana users prefer to smoke sinsemilla because it produces more weight of useable material and is easier to prepare for use than seeded flowers. The seeds cannot be used for intoxicating purposes and are commonly thrown away.

The size and yield of the plant is dependent on several factors.

1.) Variety.

Since there is no central source for seed, varieties have not been standardized as they have for commercial vegetable and flower crops. Growers either use seed that they have found in marijuana they bought for use, in the same way that a person might start a plant from an avocado pit, or find a source of seeds or cuttings. When they need new plants, they then use seeds which they have produced. Because of this each grower eventually has his/her own distinct variety. There are literally thousands of varieties and each has its own potential yield and prime conditions, climate and weather, gardening technique, water conditions, and date of planting.

2.) Cultivation Technique

No matter what the potential of a particular plant's genetics, cultivation processes determine the actual yield of a particular plant.

A.) Plants which are grown close together stunt side growth so that each has smaller buds with less branching than it would grow given more space. Unreleased DEA studies on spacing and yield confirm this. In these experiments, plants were placed on 6 foot centers (about 36 square feet) and yielded just one pound of bud per plant. A typical indoor garden may be the same size as the single plant grown by the DEA, six by six feet, a total of 36 square feet.

Rather than trying to grow large plants, growers often use a method dubbed, "sea of green". Plants are started four or more per square foot and are never intended to grow out of that space. This

TO: United States Sentencing Commission
FROM: Ed Rosenthal

March 7, 1994

garden may have plants growing at the density of four plants per square foot, a total of 144 plants. Each plant would have a maximum yield under ideal conditions with a high yielding variety of only about one half ounce. The maximum yield of the garden would be four and a half pounds. If the grower were reproducing plants using cuttings, a small tray of them, with a size of less than two square feet, could contain 36 plants.

R.) Plant growth and yield is determined in part by the amount of water the plant receives. Less water results in smaller growth. This is especially important in gardens which receive no irrigation. In parts of the country, there is no water for long periods during the growing cycle. This results in very small plants. Indoors, plants are often over watered, resulting in poor growth.

C.) Plants receiving low light or too intense a light have lower yields than plants receiving optimum light. Because of the necessarily surreptitious nature of growing operations and the need for them to remain hidden, plants are often grown in less than ideal conditions. They are often hidden under the shade of trees or in other areas where they do not receive direct sunlight. Plants receiving these conditions will grow much smaller than plants receiving direct sunlight. In areas of the country where the sun is very intense, plants will be stunted from over-radiation. Indoors, growers often try to grow plants using inadequate lighting, resulting in very low yields.

D.) Outdoors, late planting results in smaller plants, because the plants of a single variety flower at the same time no matter the size. Surreptitious growers often plant late so that there is less time for the plants to be detected and so that stay small, making detection less likely. Indoors, growers using the "sea of green" force the plants to flower when they are only 18 inches high. At maturity, the plants are only two to three feet tall, with no branching and a yield of only one half ounce.

3.) Conditions

A.) Soil fertility and fertilizing regimen plays a part in growth of plants. Plants receiving inadequate nutrients have smaller yields than those obtaining adequate amounts. No two farmers use exactly the same techniques, so each will have different results.

B.) Temperatures which are too high or too low retard both growth and yield. This affects all outdoor crops. Indoors, gardeners often find it difficult to control temperatures because of the heat generated by high intensity of the lights needed for indoor cultivation.

TO: United States Sentencing Commission
FROM: Ed Rosenthal

March 7, 1994

C.) Very high or low humidity lowers the growth rate and yield of the plant by slowing photosynthesis. This leads to lower yields.

D.) Rain may destroy a crop if it occurs close to harvest time because the ripening buds are susceptible to mold under conditions of high humidity and moisture. Once attacked the bud can be destroyed by the spreading fungus overnight.

E.) Insects such as aphids, whiteflies, mites and thrips attack marijuana gardens indoors and out. These insects suck away the plant's vigor, resulting in less growth and yield and even death of the plant.

F.) Animals such as field mice, rats, rabbits, deer and raccoons regularly attack marijuana grown outdoors. They can destroy an entire plant in a few minutes and can attack any time during the season.

All of these factors make it clear that plant counts are an unreasonable method of determining sentencing of people convicted of marijuana offenses. A plant normally yields from 10 grams to about 100 grams.

Dr. Elsohly, at the University of Mississippi in Oxford conducted experiments on weight and spacing. Originally the Drug Enforcement Administration tried to keep the results confidential because they were so damaging to testimony given by DEA officers who testified in state trials that the plants produce between one and two pounds of buds. Dr. Elsohly's report clearly shows that spacing affects yield tremendously.

As enlightening as his experiment was, Dr Elsohely tested only one variety, growing for a single length of time and he has not tested for other environmental factors such as shading, water stress, weather, improper irrigation and nutrient problems. That is, the problems faced by all gardeners. The plants he grew were given ideal nutrients, plenty of sun and a uniform planting date. The goal of the experiment was to produce the largest plant possible.

EFFECTS OF PRESENT POLICIES

The effects of the present policies which result in severe penalties and high risk have been a disruptive source on cultivation and domestic supply. Over the years growers have become aware of the harsh penalties and have either stopped cultivating or downsized their operations so that they face lower sentences if caught. This has led to a shortage of domestic marijuana and the price has climbed. As a result many people who would prefer to use domestic have switched to lower price imports.

TO: United States Sentencing Commission
FROM: Ed Rosenthal

March 7, 1994

For instance, in Portland, OR, a center of indoor cultivation, domestic buds sell for \$300 an ounce and Mexican buds, slightly less potent, retail for as little as \$125 an ounce. The situation is similar in other areas. Rather than unorganized cultivators a more organized criminal element is getting involved in supplying the market.

Since somebody will always be around to meet demand, no matter what risks they may face, making the laws or penalties harsher presents a niche for the more desperate and reckless person as the supply side is vacated by people who do not think possible gain is worth the risk. This is not a good trade-off.

SENTENCING POLICY ALTERNATIVES

It is inherently unfair to sentence a grower for yields that s/he wasnot expecting nor able to produce. As it stands now, a person with a small garden which has a potential yield of about two kilograms can be sentenced to 63 months or more, while an individual with a garden with many fewer, but much larger plants might receive only 10 months.

Rather than fixing an arbitrary weight to each plant, which is not based on a realistic assessment of the individual situation, the guidelines in the case of cultivators should be amended to reflect either the potential yield or the yield at seizure. In this way, the system will be more equitable. Although it would take more work by the courts, it would lead to a system of justice based on rational consideration.

The law has been particularly hard on indoor growers who use the "sea of green method" and fall under the mandatory minimum sentencing laws. Under these provision a minimum sentence of five years is required for the cultivation of 100 plants or more, and ten years for 1000 plants. The Sentencing Commission should recommend that the law be changed to reflect the actual yields of the plants in the same way that weight is considered for other marijuana offenses.

If the Sentencing Commission desires to allocate a specific weight to each plant, the weight of 100 grams per plant, which is applicable up to 49 plants at present in sentencing procedures should be extended to all plants, and the Sentencing Commission should recommend that the law should be changed to reflect this.

If a plant count is to be used, consideration should be made for plants not likely to be harvested. Clones and seedlings have a variable success rate and consideration should be made for clones not likely to grow to maturity. Perhaps the best way to do this would be to exclude all plants under six inches tall from the plant count.

Male plants are ordinarily removed from the garden, so that should

TO: United States Sentencing Commission
FROM: Ed Rosenthal

March 7, 1994

be taken into account in figuring the plant count in gardens which have not been "sexed".

The Guidelines should also be amended so that the court can consider downward departures based on mitigating circumstances for marijuana crimes of Level 24 and under. Penalties other than incarceration should be considered for first time offenders in these cases. This would free the courts of many small and relatively minor cases as well as limiting the possibility of these offenders mingling with hardened criminals.

It would be a step in the right direction if penalties for all marijuana offenses were lowered, especially considering that violent crimes and crimes against property are treated lighter in sentencing than some marijuana offenses. Certainly possessing, growing or selling marijuana is not as serious threat to society than a crime with a clear victim who complains.

Obviously, neither the people who are buying nor selling feel victimized. In order to apprehend these people police must employ snitches and invade privacy, two things considered un-American until a few years ago. The Constitution is bent by assaults by the prosecution on the First, Fourth, Fifth, Ninth and Fourteenth Amendments.

LONG TERM PROSPECTS FOR THE MARIJUANA LAWS

the campaign to wipe out marijuana is doomed to failure for reasons which are not applicable to other drugs. Heroin, opiates and other drugs which induce a physical dependence seem to the user to limit free choice. They are dependent on the drug just as we need food, several times a day. Cocaine users over a period of time become dysfunctional. Marijuana however, does not induce a physical dependency and rarely induces a dysfunctional situation. Instead, most marijuana users enjoy its recreational use. They do not feel that it has caused them much harm except possibly for legal hassles.

If you asked most heroin or cocaine addicts whether they regret their use, most would answer affirmatively. The same is not true of marijuana. Most people who use it feel it has been a positive thing in their lives. You can lock a person up and throw away the key, but s/he will still tell you that your law is wrong and that the law should be changed.

No matter how harsh the laws are you cannot hide the truth that people enjoy using marijuana and will risk liberty to indulge in it. The current policy does the exact opposite of its intentions. By making marijuana hard to get through interdiction or destruction of plants, the price goes up because of reduced supply. This induces more people into the trade and at the same time causes a certain

TO: United States Sentencing Commission
FROM: Ed Rosenthal

March 7, 1994

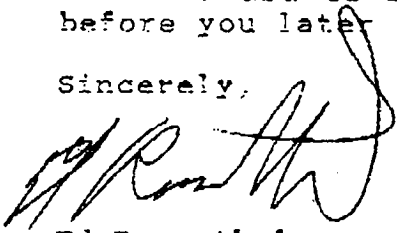
group of people who are experimenting with drugs to choose less expensive substances such as cocaine, crack or heroin. Certainly members of the committee would consider it more serious to the persons health and well being if a family member was using heroin or cocaine than if they lit up an occasional joint.

With the civil regulation of marijuana, use of hard drugs such as heroin and cocaine would plummet. This has been proven in Holland. Which has developed a successful hard drug-soft drug policy. Members of the committee who say we cannot take the risk should look at the dismal failure of the current regulatory system, which has been in effect since 1937, 57 years, most of our lives.

In 1937 there were estimated to be 50,000 marijuana users. Now estimates for regular users run between 25,000,000 - 50,000,000 people. That is an increase of 50,000 - 100,000%. Criminal regulation of marijuana, no matter how harsh or inappropriate the penalties will not work because a large minority of our citizenry know that marijuana use is not very risky to health and is very enjoyable.

I hope you will take the information I have provided into account during your consideration of the Sentencing Guidelines. I look forward to answering any questions you may have when I speak before you later in March.

Sincerely,



Ed Rosenthal