



CANNABIS STRAIN VARIETIES

100% sativa [14 profiles]



0%

sativa hybrid [40 profiles]



50% hybrid [60 profiles]



hybrid 50%

[39 profiles] indica hybrid



0%

[39 profiles] indica 100%



Green: A Field Guide to Marijuana explores today's very best cannabis strains in glorious full color. The "Primer" section demystifies the culture of this complex flower and explains the botany that makes each strain unique. The "Buds" section describes the variations of lineage, flavor, aroma, and mental or physical high that define 170 exceptional strains. Smart, practical, and beautiful, Green is essential reading for both the cannabis connoisseur and the occasional toker.



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Michaels & Christiansen

GREEN

A Field Guide to Marijuana

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GREEN

A Field Guide to Marijuana

By Dan Michaels
Photographs by Erik Christiansen



Cannabis Overview

In order to truly appreciate and enjoy all the wonderful things marijuana has to offer, we must first lay a healthy foundation of knowledge on which to build our experiences. Lies, propaganda, and misinformation about marijuana have proliferated throughout history and it is only through proper education and the sharing of accurate information that we can start to undo the harm this has caused. Famous scientist and botanist George Washington Carver wisely said, “Education is the key to unlock the golden door of freedom.” Hopefully, with the help of the enlightenment provided in this book, we can all continue to spread the truth that has already begun turning this key.

What Is Marijuana?

Figuratively, marijuana is earth's greatest gift to mankind. Physically, marijuana is a natural body and mind-altering treat. Literally, marijuana is the budding flower of the female cannabis plant.

But what makes marijuana so desirable is that it naturally produces a multitude of diverse chemical compounds called "phyto-cannabinoids." When consumed, these cannabinoids produce a variety of wide-ranging effects on the human mind and body by activating and stimulating our body's internal cannabinoid receptors. All humans and animals naturally possess these "endo-cannabinoids" receptors. This complex cannabinoid system is the very reason cannabis has been consumed for both recreational and medicinal purposes by ancient cultures and modern societies alike.

The most well-known cannabinoid is called delta 9-tetrahydrocannabinol (THC). It is the psychoactive chemical that produces the desirable "high" or "stoned" feeling when consumed.

The other primary cannabinoid is known as cannabidiol (CBD). It has been found to be an effective treatment for a wide range of health conditions and thanks to modern scientific research, we've finally been able to quantify and prove these health benefits.

7,000 BC

First known use of cannabis plant in China.

0

Number of deaths caused from using marijuana.

75+

Number of diverse chemical compounds, called cannabinoids, found naturally in cannabis.

14%

Average THC potency found in marijuana compared to 1% in the 1970s.

1937

Year the U.S. federal government passed the Marijuana Tax Stamp Act making marijuana illegal.

1/3

The total worldwide cannabis cultivation and production that takes place in North America.

\$300

Average price for an ounce of marijuana in the United States.

1996

Year California passed Prop 215, making it the first state ever to legalize marijuana for medicinal use.

1,000+

Estimated number of different marijuana strains created.

220m+

Estimated number of adult marijuana users worldwide according to the United Nations.

4:20

Cannabis culture's universally accepted time (4:20) to enjoy marijuana and date (April 20) to observe and celebrate cannabis.

2014

Year Colorado became the first state to sell legalized marijuana for recreational use.

What Are Strains?

A marijuana strain is simply a particular variety of the cannabis plant. Not so simple is the breeding process and genetic makeup within each strain. Lucky for us all there are master growers, creative breeders, and other amazing minds hard at work behind the scenes hunting for, cloning, and creating all the super strains that are available to all of us today.

But you don't need to be an expert to understand that all strains fall into one of three main categories: (1) **sativa**, (2) **indica**, or (3) **hybrid**. Sativa and indica strains are the two main naturally occurring species, and hybrid strains are a mix of the two. As new hybrid strains are developed they are crossbred with other existing strains, giving growers endless opportunities to experiment and produce the next great strain. No matter if a strain is a natural variety or a hybrid, each will have very specific qualities and unique psychoactive effects (*What's Your Phenotype*, see page 18).

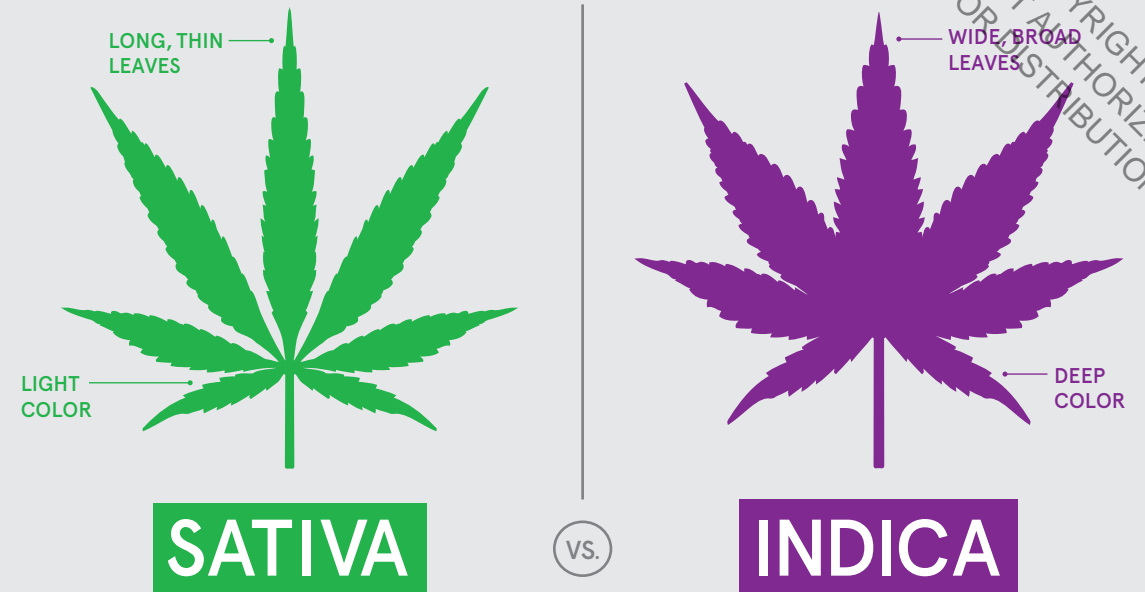
As more and more strains become available, it can seem overwhelming to figure out which ones are best to procure and enjoy. You obviously can't rely on all the crazy and unusual names given to these strains, so what do you do? For starters, it's best to begin by narrowing down your choice to the variety type.

Sativas are known for being a "daytime" strain because they provide you with an uplifting and energetic head high. Indicas on the other hand are a better "nighttime" strain and will get your body stoned, making you feel relaxed, mellow, or even sleepy.

Hybrids provide a combination of effects that depend on the strains' lineage—their parents. Typically these hybrids are either indica or sativa dominant, meaning they will express the characteristics of the dominant variety with less characteristics of the secondary variety. An indica-dominant hybrid might give you a strong body buzz without feeling tired, or a sativa-dominant hybrid may make you very sociable and cheerful but still calm and relaxed. Other times, a hybrid can be a "true" hybrid, meaning that it is an even mix of both varieties.

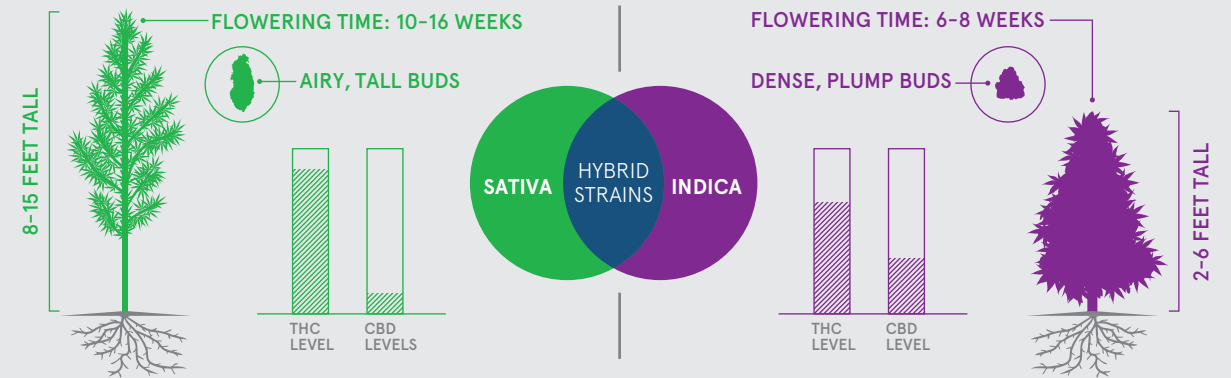
CANNABIS IS CLASSIFIED INTO THREE SPECIES: SATIVA, INDICA, OR RUDERALIS.

The cannabis we love to smoke is either indica, sativa, or usually a hybrid of the two.

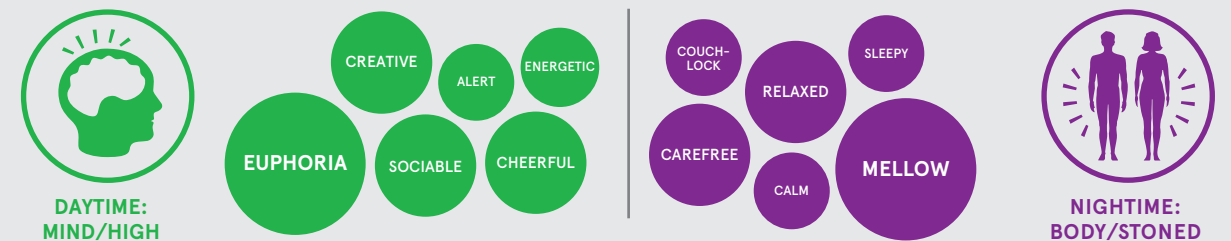


RUDERALIS is a short, hearty, wild strain with fewer leaves and low THC content. It is not used for consuming but is sometimes crossbred with indicas or sativas to produce an "autoflowering" hybrid—meaning it will produce flowers (buds) based on age rather than light cycles like sativas or indicas.

GROWING



EFFECTS



What's Your Phenotype?

The term *phenotype* or “*pheno*” will inevitably come up when talking about cannabis strains. It’s one of those heady words that is actually pretty basic in concept but very complex in nature. By definition, a phenotype is simply any living thing’s observable characteristics. In the cannabis plant these traits include size, shape, color, THC content, bud density, flavor, and smell to name a few. All these various traits can come together in a multitude of combinations adding to the complexity and variety of strains.

Seeing and smoking an assortment of strains will help you to start noticing these distinctions in phenotypes and more importantly help you to figure out what traits you like or don’t like. If you prefer an energetic high, a pure sativa strain like **Durban Poison** (see p/166) will carry that trait. Or if you prefer the mellowing smoke of an indica strain, than maybe a strain like **Platinum OG** (see p/298) is worth trying. There are even strains bred with amazing flavors like **Bubble Gum** (see p/114) or **Blueberry** (see p/104).

It’s the strain’s unique combination of phenotypes that makes each strain so distinct and special. Each strain is carefully bred to express very specific trait combinations with all this information stored right into its own DNA. This unique genetic makeup—referred to as the strain’s “genotype”—is what allows the same strain to be grown again and again. The genetics will always be the same but sometimes the phenotypes can vary—this is what you call “variations in phenotype.”

Variation in phenos in the same strain is okay, but if they’re completely different than either the plant was improperly grown or you’re not getting what you paid

for. This is why educated smokers talk about phenotypes and why it’s so important to know which phenos to look for when trying new strain varieties.

For example, every bud shown here is the same strain called **Girl Scout Cookies** (see p/182). Each bud came from the same genetic code but is grown from different producers or crops. As you can clearly see, not all buds from the same genotype will look or behave the same. This is why when you buy Girl Scout Cookies from one source, that bud’s characteristics may vary slightly from the same strain bought elsewhere. Maybe the color is slightly off, or perhaps the smell is more pungent, or maybe the effects don’t last as long.

Why? Most often, it’s the environment that directly affects a strain’s phenotypes. Things like where the plant was grown, soil conditions, fertilizers, even the light or water source can directly effect the strain’s inherent ability to properly express its desired traits—some may be suppressed while others may be exaggerated. Ultimately, it’s how these phenotypes are revealed that will determine whether or not you have an award winning bud or a poorly grown dud.

INDOOR VS. OUTDOOR

Buds 1, 2, and 3 were grown indoors while buds 4, 5, and 6 were grown outdoors.

Plants grown indoors use artificial light under a completely closed environment—soil, water, fertilizers, even temperature and carbon dioxide levels are monitored and controlled. This method often produces strains coated in precise crystals with very high potency and consistent phenotypes throughout the crop.

Outdoor strains on the other hand use natural sunlight and interact with the terroir, the unique land and climate of a specific location. This produces larger plants that are generally more robust to combat Mother Nature’s variables like wind and weather. The flavors and resin glands are also often more complex and viscous.

Simply put, indoor growing is more scientific while outdoor growing is more artisanal. Either way, if the cannabis plant is grown properly and to its full potential, the resulting buds will be spectacular.



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Terpenoids

Aromas, Flavors, and Therapeutic Effects

In addition to cannabinoids, the components of the cannabis plant's essential oils, called terpenoids, play an important therapeutic role in the overall entourage effect. The aromas and flavors of any given cannabis strain also depend on which terpenoids predominate. While nearly 20,000 terpenoid compounds have been found in all types of plant life, just over 200 of these terpenes have been identified in cannabis with the following eight occurring in significant amounts and most frequently.

Alpha-pinene

Also found in Pine needles
 Flavors: piney, rosemary
 Therapeutic effects: anti-inflammatory, antibacterial, aids memory, bronchodilator (aids breathing)

Beta-caryophyllene

Also found in echinacea
 Flavors: citrus, oily, spicy
 Therapeutic effects: anti-inflammatory, gastric cytoprotectant (cell protectant)

Caryophyllene Oxide

Also found in lemon balm
 Flavors: clove, peppery, spicy, woody
 Therapeutic effect: Antifungal

Limonene

Also found in lemons
 Flavors: citrus, juniper, lemon, peppermint, rosemary, tangerine
 Therapeutic effects: immune stimulant, antidepressant, antianxiety

Linalool

Also found in lavender
 Flavors: candy spice, floral, herbal
 Therapeutic effects: antianxiety, anticonvulsant, sedative

Myrcene

Also found in hops
 Flavors: acrid, citrus, clove, fruity
 Therapeutic effects: anti-inflammatory, sedative, analgesic (pain relief)

Nerolidol

Also found in oranges
 Flavors: berry, floral, sweet, woody
 Therapeutic effects: sedative, antifungal, skin protectant

Phytol

Also found in green tea
 Flavors: creamy, earthy, floral, vanilla
 Therapeutic effects: anti-insomnia

CANNABACEAE

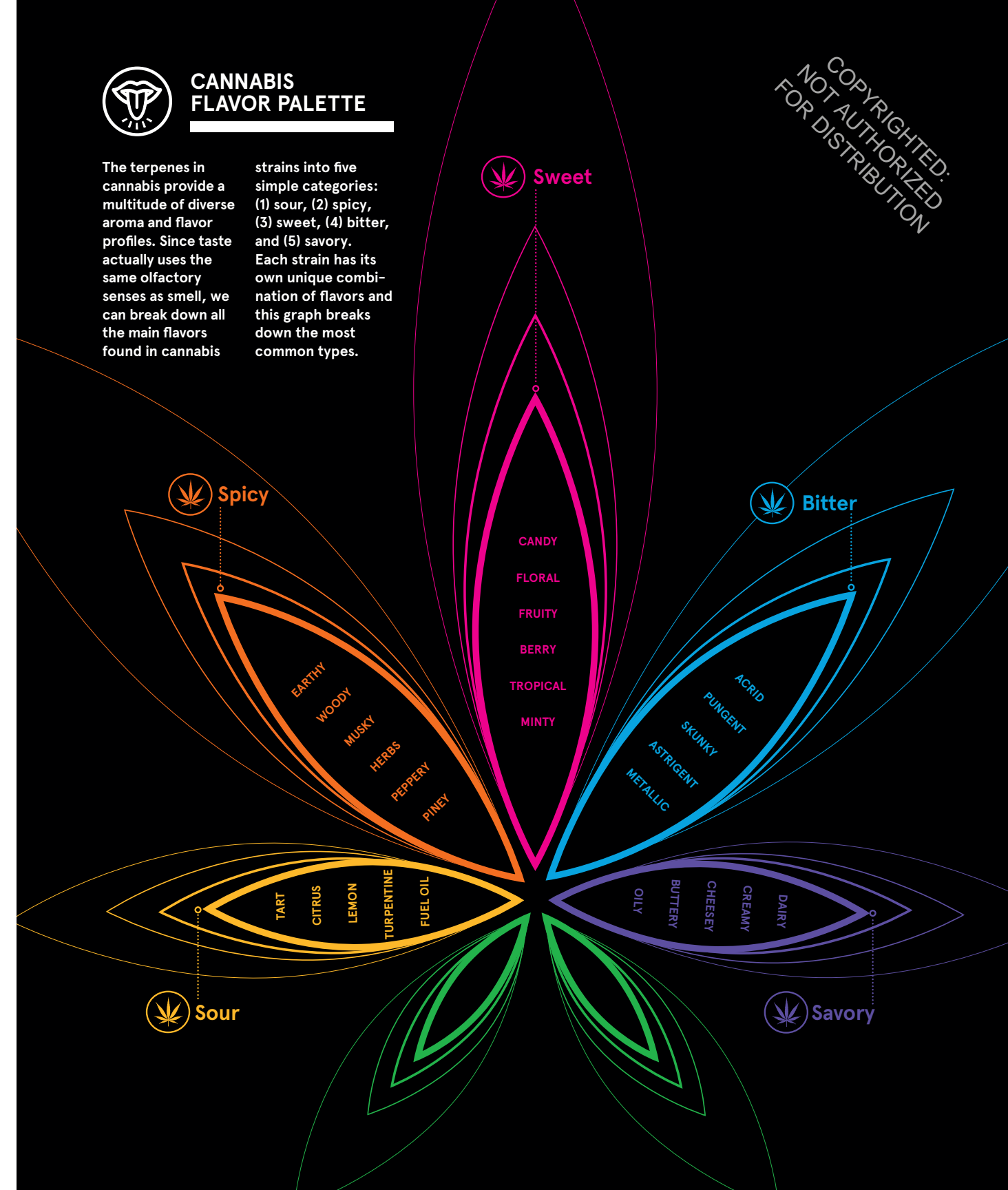
Hops (used to make beer) and cannabis are both members of the same *Cannabaceae* plant family. Unfortunately hops don't contain any THC but do have similar terpenoids that give pungent beers like IPAs an aroma very similar to marijuana.



CANNABIS FLAVOR PALETTE

The terpenes in cannabis provide a multitude of diverse aroma and flavor profiles. Since taste actually uses the same olfactory senses as smell, we can break down all the main flavors found in cannabis

strains into five simple categories: (1) sour, (2) spicy, (3) sweet, (4) bitter, and (5) savory. Each strain has its own unique combination of flavors and this graph breaks down the most common types.






Buyer's Guide

When it's time to finally part with your hard-earned cash and buy some buds, it's important to know what to look for in order to make sure you're getting your money's worth. If you're able to buy from a legitimate marijuana dispensary then you can trust the weed is going to be stellar. The dispensary's "bud-tender" will be able to detail each strain's specific phenotypes or they will be able to recommend a strain based on your own preferences. But if you're like the majority of recreational smokers, you have to build a trusted network to score some dank nugs. Even still, there's always a chance your regular hookup could have some bad weed from time to time or your budget simply can't afford the best. So here are some important things to examine and rate to determine if the buds make the grade.

LOWS, MIDS, AND HIGHS

Marijuana can be broken down into three quality grades: low, mid or "regs," and high. Here's a quick comparison of the three:

	Low Grade 	Mid Grade 	High Grade 
Bag Appeal	Poor Lots of extra stems, and seeds	OK Some stems and leafs, maybe a few seeds	Great No extra stems, leafs, or seeds
Texture	Dry and compact Coarse, Seedy lots of shake (crumbs)	Average Some buds, some shake	Full and well-cured Fluffy dense buds, no shake
Color	Dull, muddy	Clean, green	Rich, vivid
Flavor	Harsh	Mild	Smooth
THC Content	>1-5%	6-14%	15-25%+
Price	\$	\$\$	\$\$\$

Pedigree



Was the cannabis grown from a reliable source?

More often than not, you're going to have to take a leap of faith and take the seller's word. Once you build a strong bond with your source, hopefully they'll share more grow information with you. On the other hand, if you're buying from a dispensary you can always ask them about the genetics, how the cannabis was grown, and other valuable information so you can keep tabs and refer back to the growers or breeders you trust when trying a new strain.

NEW HOOKUPS

When buying from a new source, whether it be a new dispensary or new friend-of-a-friend's source, make sure that at first you buy only a small amount to test their product before purchasing larger amounts the next time around. Any reputable source will respect this gesture and it could save you from wasting your time and money on a bad connection.

Weight



Was the herb prepackaged or was it weighed in front of you?

Avoid prepackaged buds and opt for a freshly weighed amount. If you have no choice but to pick a prepackaged baggy, make sure you examine the contents before handing over your money.

Appearance



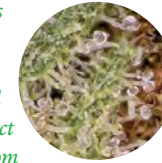
Do the buds look appealing?

At first glance, you should be excited when looking at the bud. It shouldn't be crushed, compressed, or crumbly looking. It should have a nice distinct fluffy nugget shape and the colors—greens, reds, and/or purple hues—can be light or dark and should look clean and vibrant,

not dull and dirty. The bud should also look nicely manicured, meaning all the bigger leaves and extra stems trimmed off nicely; not left on or hacked away.

TRICHOMES

Can you see tiny crystals all over the bud? Your buds should have plenty of clear or amber-tinted resin crystals if you expect to get the most effects from it. Ideally, it will be glistening with crystals but sometimes storing and moving can cause some to fall off, which isn't a big deal. But if they are seen in odd patches, or there are only a few crystals, or none at all then the herb was not properly taken care of and you shouldn't pay top dollar for it.



cured properly and won't be tasty or potent. The other is if it smells dirty.

DIRTY WEED

Sometimes improperly grown or stored weed can grow mold and/or mildew. If the bud smells moldy, very muddy, or like ammonia, then chances are it has mold. If you see white stringy stuff or an unnatural white coating on the exterior, that's definitely a sign of mold or mildew. Both of these are bad signs and you shouldn't buy it, never mind smoke it.



Personal Experience



How did it make you feel?

Above all else, this is the most important factor to consider when buying bud.

This is a very personal preference that only you can experience, so it's worth taking notes and keeping a journal on which strains you've tried, where you bought them, and what you enjoyed (or didn't enjoy) about them so you can start appreciating and recognizing all the wonderful and distinct experiences various strains have to offer.

THE NEGATIVE EFFECTS

New users and experienced smokers alike might sometimes experience a few negative effects after taking a new strain. Don't panic, these minor side effects are temporary and should wear off quickly, so just relax and let the time pass. If they mess with your high, stop using that strain and try a new variety next time.

- DRY MOUTH
- HEADACHE
- PARANOIA
- DIZZINESS
- DRY EYES
- CONFUSION

Feel



How does the bud feel when you touch it?

Properly dried and cured buds should be neither dry nor wet; neither rock-solid nor brittle. The bud should feel dense and squishy. When you break it up, it should be easy to grind and feel sticky. It shouldn't crumble into a fine powder (too dry) or clump into hard balls (too wet). Any stems should bend then break when bent, not just bend without breaking or quickly snap off.

Smell



Does it smell appealing?

The aromas should be pleasant and appetizing to you. Chances are if you like the way it smells, you'll love the way it tastes. Just keep in mind that smell has nothing to do with potency, just flavor. Some of the best and strongest buds can smell very harsh and even skunk-like or can just have a slight, subtle fragrance. One exception is if the buds smell very "green"—sort of like fresh lawn clippings—then it probably wasn't

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burds

Cannabis Strains

Marijuana has come a long way since the days of our ancestors. Today, creative minds across the world are cultivating and crossbreeding cannabis plants to create modern-day marvels in the form of majestically beautiful and one-of-a-kind strains—from heirloom landraces to creatively named super hybrids. The following pages will guide you through some of the best varieties of marijuana strains we could find, organized alphabetically by strain name. While the breathtaking focus-stacked images will give you a high-definition visual of their appearance, the profile information will provide you with the unique details specific to each individual strain. Each profile includes the following:

STRAIN NAME

The name given to the strain by the original breeder or grower.

TYPE

The strain's variety—

sativa ● (100%)

sativa hybrid ● (> 60% sativa)

hybrid ● (≈ 50% sativa + 50% indica)

indica hybrid ● (> 60% indica)

indica ● (100%)

LINEAGE

The genetic female and male parents.

SMELL/TASTE

The common aromas and flavors.

COMMON EFFECTS

The common physical and psychoactive effects.

TOP MEDICINAL USES

Conditions the strain has been known to help.

AWARDS

Any major awards received (1st, 2nd, or 3rd place).

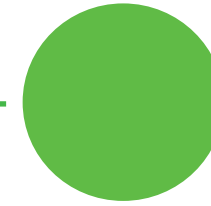
SIMILAR STRAINS

Other strains that share similar phenotypes.

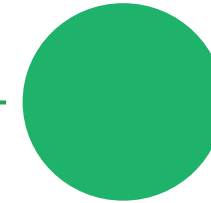
DESCRIPTION

A brief outline of other pertinent information about the strain.

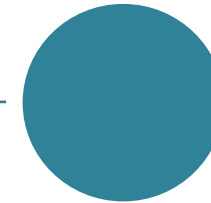
sativa 100%



sativa hybrid > 60%

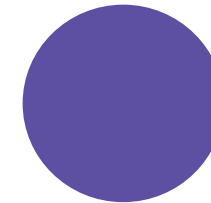


hybrid 50%



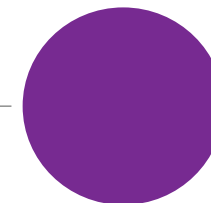
50% hybrid

> 60% indica hybrid



0%

100% indica



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STRAIN NAME

5Gs × OGSD ●

TYPE

hybrid ●

LINEAGE

(Dieselberry × Witches Weed) ×
(OG Kush × Sour Diesel)

SMELL/TASTE

lemon, acrid, fuel

COMMON EFFECTS

uplifted, creative, euphoria

TOP MEDICINAL USES

mood enhancement, stress

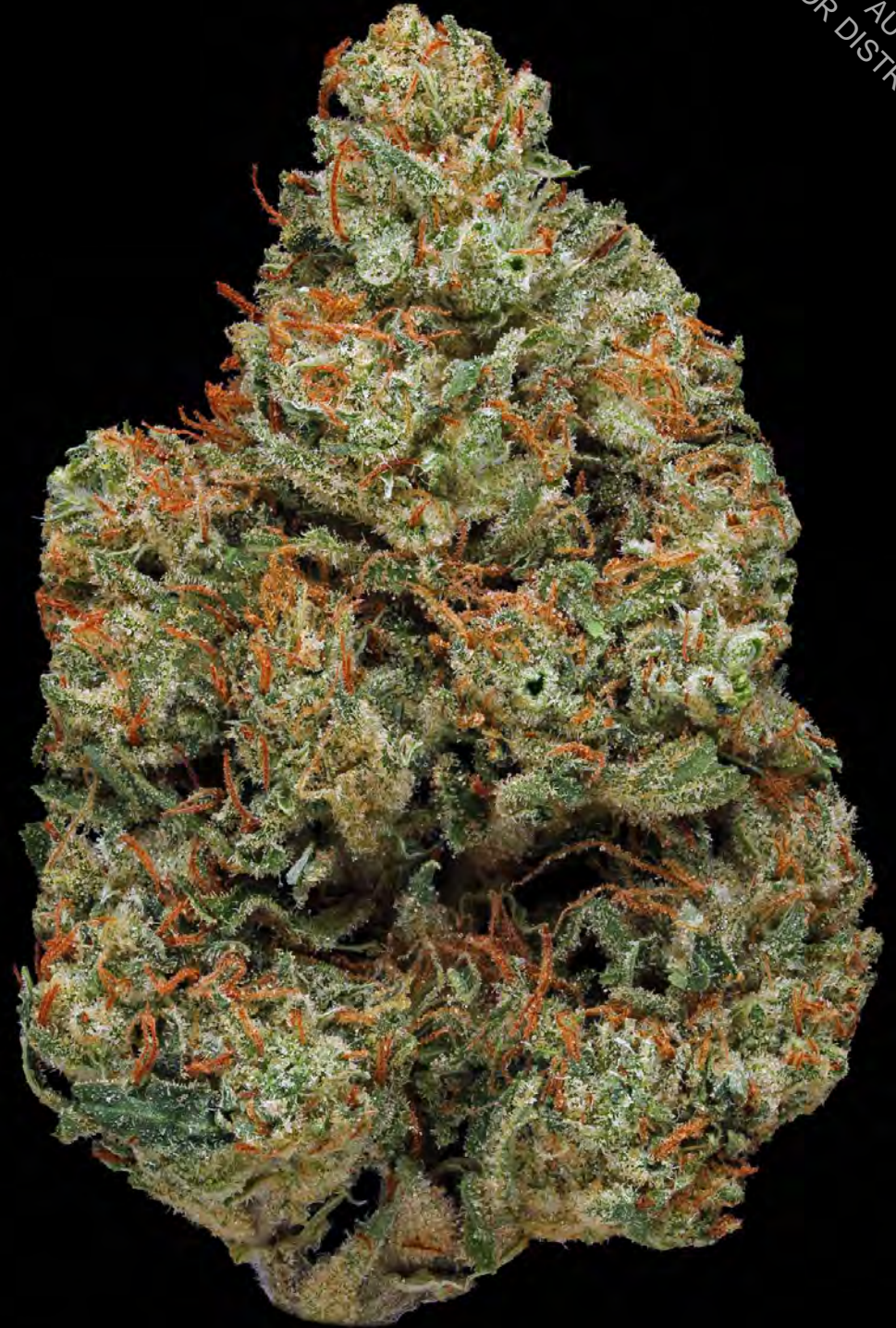
SIMILAR STRAINS

Chemdawg ● p/132

Allen Wrench ● p/66

NYC Diesel ● p/274

This unique breed hails from the infamous Humboldt County region of California—well regarded as the birthplace of modern-day hybrid cannabis cultivation. This strain consists of elite genetics combined with great breeding skills to produce a nice one-off hybrid that's as potent as it is stinky. The dense buds have a very lemony aroma and flavor, mixed with a fuel funk and a dash of sour orange zest. Overall, 5Gs × OGSD is a prime example of a Humboldt original.

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STRAIN NAME

Abusive OG

TYPE

hybrid

LINEAGE

OG Kush phenotype

SMELL/TASTE

lemon, pine, fuel

COMMON EFFECTS

cheerful, uplifted, relaxed

TOP MEDICINAL USES

mood enhancement, anxiety

SIMILAR STRAINS

SFV OG p/324

Tahoe OG p/368

XXX OG p/390

This variety of the renowned OG Kush is rumored to have origins that trace back to the famous rap artist and marijuana advocate Snoop Dogg. Regardless of the rumors, Abusive OG is no doubt a prime example of an OG—very dense nugs heavily coated in crystals with a unique sour pine flavor commonly referred to as “kushy.” These buds’ ability to deliver a long-lasting, body-buzzing high is what makes Abusive OG a cut above the rest.

The Legend of OG

When “OG” is used in a strain name, it typically refers to its lineage back to the original OG Kush strain. The initials OG are thought by most to mean “Ocean Grown” for OG Kush’s roots in Southern California, while some attribute OG to mean “Original Gangster” to represent the first generation of a strain. Semantics aside, OG strains are widely popular and highly coveted for their distinct flavors, appearance, and enduring effects.



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STRAIN NAME

Afghani

TYPE

indica

LINEAGE

Landrace (Afghanistan)

SMELL/TASTE

spicy, citrus, earthy

COMMON EFFECTS

body buzz, sleepy, couch-lock

TOP MEDICINAL USES

insomnia, pain

SIMILAR STRAINS

G-13



p/176

Sour Bubble



p/336

Purple Sticky Punch



p/312

Afghani is known throughout the world as one of the finest pure indica cannabis strains. Its dark sticky flowers are a fast and easy grow and its monstrous resin production and trademark indica effects make it an indispensable component in the breeding of many other famous hybrid strains. The mellow, exotic flavors smoke smooth and hit strong. A favorite nighttime strain, Afghani's ability to produce long-lasting and body-numbing physical effects is second to none.



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STRAIN NAME

Afgoo ●

TYPE

indica hybrid ●

LINEAGE

Afghani × Maui Haze

SMELL/TASTE

piney, spicy, strawberry

COMMON EFFECTS

mellow, sleepy, euphoria

TOP MEDICINAL USES

insomnia, pain

SIMILAR STRAINS

Strawberry Cough ● p/352

Maui Wauai ● p/258

Afwreck ● p/60

This supersticky bud blends two legendary landrace strains to create a very effective and powerful indica-dominant stunner. The smoke is earthy flavored with subtle hints of sweet strawberry, and the heavy full-body high can be felt almost as soon as you exhale—and then it seems to last forever. Newcomers to Afgoo may experience a couch-lock effect with this perfect nighttime treat. A hint of euphoria will also creep in (thanks to its Maui Haze genetics), making Afgoo a great smoke to end a long, hard day.



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STRAIN NAME

Afwreck ●

TYPE

sativa hybrid ●

LINEAGE

Afghani × Trainwreck

SMELL/TASTE

sweet, floral, citrus

COMMON EFFECTS

uplifting, euphoria, cheerful

TOP MEDICINAL USES

stress, mood enhancement

SIMILAR STRAINS

Afgoo ● p/58J1 ● p/220Cherry AK ● p/136

Although crossed with Afghani, Afwreck's phenotypes have been influenced mostly from its powerful Trainwreck parent. This strong sativa has a pleasant mix of sweet and sour flavors that are balanced with a fresh floral aroma. The effects immediately focus exclusively on the mind while the Afghani makes a late guest appearance to add a subtle body high that finishes off the buzz nicely.

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