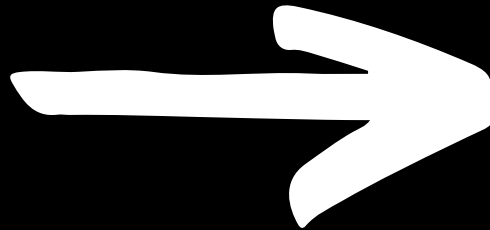




# GROW GUIDE



# Growing for Beginners

## Top 5 Topics to Get Started



### **Supplies List**

Everything you need for growing indoors and outdoors.



### **Growing Setup**

Requirements for space and environment growing indoors and outdoors.



### **Plant Care**

Topping and pruning best practices, growing techniques and how-to guide.



### **Feeding and Foliar**

Watering and pest management best practices. Pest identification.



### **Troubleshooting**

Get advice from professionals to learn how to avoid and solve common growing problems.



# Supplies List:

## Indoor:

### Grow Tent or Space

- Depending on your technique, allocate at least 2-4 square feet per plant.

### Lighting System

- LED, HID, or fluorescent lights based on preference and budget.

### Ventilation System

- Include exhaust fans, intake fans, and carbon filters for odor control.

### Temperature and Humidity Control

- Digital thermometer, heater, and/or fan as needed.

### Growing Medium

- Soil, coco coir, or hydroponic setup based on preference

### Nutrients & Fertilizers

- We recommend using a 20:20:20 General Purpose fertilizer in veg.
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## Outdoor:

### Location and Soil Preparation

- Choose a full-sun, well-drained location and prepare the soil with organic matter.

### Natural Pest Control

- Encourage the use of companion plants, beneficial insects, and natural predators.

### Protective Measures

- Consider cages or stakes to support plants and protective measures against wildlife.

### Mulch

- Help with water retention and weed control.

### Organic Fertilizers

- Options like compost or well-rotted manure for slow-release nutrients.
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## Both:

### Clones or Seeds

- Buy them at Buds & Roses. Always check with your local laws before cultivating cannabis

### Watering System

- Depending on the climate, consider drip irrigation, soaker hoses, or a good old watering can.

### Protective Measures

- Consider cages or stakes to support plants and protect them.

### Pruning Tools

- Pruning shears or loppers for maintenance.

### Containers or Pots

- Choose appropriate sizes based on the chosen growing method. We recommend at least 3 gallons.

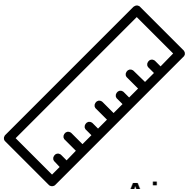
### pH Testing

- Essential for maintaining proper pH levels in water and soil.



# Build The Right Environment For Growing Indoors:

By paying attention to these factors and regularly monitoring your plants, you'll be well on your way to a successful cannabis grow. Each grower's setup may require unique adjustments, so don't hesitate to adapt based on your specific circumstances and the needs of your plants.



## Square Footage

Aim for 2-4 square feet per plant for smaller varieties; adjust for larger strains. Arrange plants for maximum exposure to light; adjust spacing as they grow to avoid overcrowding.



## Irrigation

Choose an irrigation method that suits your setup, such as drip irrigation or a soaker hose system. Using a timer system can automate watering, providing consistency and free up time for other essential tasks.



## Humidity

40- 70% during the vegetative stage; 40- 50% during flowering. Use a hygrometer to monitor humidity levels. Employ dehumidifiers or humidifiers accordingly. Ensure proper airflow to prevent stagnant air and mold issues.

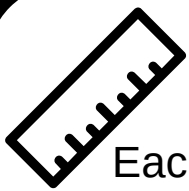


## Temperature

Ideal temperature range: 70-85°F (21-29°C) during the vegetative stage; 65-80°F (18-27°C) during flowering. Consistency is key. Avoid rapid temperature fluctuations.

# Build The Right Environment For Growing Outdoors:

Creating an ideal outdoor environment involves optimizing sunlight, climate conditions, and water availability. It's crucial to adapt these general guidelines based on your specific location, local climate, and the unique characteristics of the cannabis strains you're growing. Regular observation and adjustments will help you fine-tune your outdoor grow for the best results.



## Square Footage

Each cannabis plant typically needs about 4 to 6 square feet of space for healthy growth and airflow. Ensure that plants are spaced adequately to prevent overcrowding, which can lead to issues such as mold and mildew.



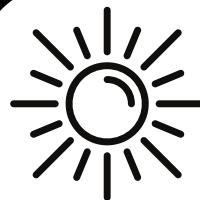
## Soil (In-Ground)

Use soil that provides good drainage to prevent waterlogging. Cannabis roots require oxygen; overly wet soil can lead to root issues. To improve nutrient retention and overall soil structure, enhance the soil with organic matter.



## Climate

Cannabis plants prefer a warm climate with temperatures between 70-85°F (21-29°C) during the day and slightly cooler at night. Cannabis generally thrives in areas with lower humidity during flowering to reduce the risk of mold.



## Sunlight

Cannabis plants thrive in full sunlight. Choose a location with at least 6 to 8 hours of direct sunlight daily. If possible, position your plants in a south-facing direction to maximize sunlight exposure throughout the day.

# Plant Care:

## Topping and Pruning

### Topping:

Topping involves removing the main stem's top growth, promoting the development of more colas or branches.

#### Why Top?

Topping redirects the plant's energy from vertical to lateral growth, creating a bushier plant. By removing the apical bud (top growth), the plant redirects energy to lower nodes, resulting in more potential bud sites.

#### When To Top?

Typically performed during the vegetative stage, before the plant transitions to the flowering stage. After the plant has developed 3-5 nodes, allowing it to establish a solid root system.

#### How To Top?

Identify the main stem's top growth, usually the newest set of leaves. Use clean, sharp scissors or pruning shears to make a clean cut just above a node (the point where leaves or branches attach to the main stem). This process can be repeated as the plant grows, creating a more complex canopy.

### Pruning:

Pruning involves selectively removing specific parts of the plant, to manage its shape, improve light exposure, and enhance airflow.

#### Why Prune?

Removing excessive foliage allows light to reach lower branches. Pruning opens up the canopy, reducing the risk of mold and mildew by improving air circulation. Pruning redirects the plant's energy, promoting healthy growth.

#### When To Prune?

Throughout the plant's life cycle, especially during the vegetative stage. Early in flowering, remove unnecessary foliage and redirect energy to developing buds.

#### How To Prune?

Use clean, sharp pruning shears or scissors to make precise cuts. Remove large fan leaves that block light to lower branches or bud sites. Avoid excessive pruning; balancing maintaining plant health and achieving your desired shape is essential.



# Advanced Growing Techniques:

Topping and pruning techniques should be done with care and consideration for the plant's overall health. While these techniques can significantly improve yields and plant health, overdoing it may stress the plant. It's advisable to start with conservative pruning and topping and observe how the plant responds before making more significant adjustments. We recommend waiting at least two weeks between cropping before making further adjustments.

Remember that these are general guidelines, and the actual space required can be influenced by factors like the specific strain, the size you want your plants to reach, and the type of training or pruning you plan to implement. Also, consider leaving some space for easy access to tend to your plants, as overcrowding can make it challenging to care for them and monitor their health. Adjustments can always be made based on your specific setup and preferences.

## SCROG

**Screen of Green Setup:**  
Place a horizontal screen or net approximately 20-25 inches above the growing medium to help control the height and distribution of the plants. Allocate 3 to 4 square feet per plant. Tuck or weave branches through the screen, spreading them out for an even canopy.

## SOG

**Sea of Green Setup:**  
Space plants closely together, usually about 1-2 square feet per plant. Use small containers, as the goal is to maximize the number of plants within a given space. Minimal training is needed in SOG. Allow plants to grow naturally, focusing on achieving a sea of small, uniform colas.

## DEFOL

**Defoliation:**  
Strategically removing select leaves to improve light penetration and airflow. Best to start in week 2 or 3 of flower when plants start to take off.

## LOLI

**Lollipopping:**  
Removing lower growth to create a "lollipop" shape, focusing energy on the upper canopy. This requires a more extreme initial first defoliation of lower branches.

# Watering Best Practices:

Ensuring that your plants receive the right amount of water at the right time directly influences healthy growth development.



## Water Quality

Ensure the water used is pH-balanced, ideally around 6.0 to 7.0. This helps the plants absorb nutrients effectively. Use clean, filtered water to avoid introducing contaminants or impurities to the soil.



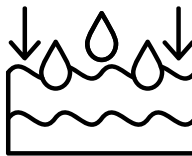
## Water Frequency

Establish a consistent watering schedule based on the specific needs of your plants and environmental conditions. Adjust watering frequency according to the growth stage; young plants may need more frequent watering than mature ones.



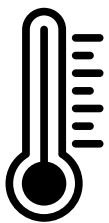
## Drainage

Use a growing medium that promotes good drainage to prevent waterlogging, which can lead to root issues. Ensure containers have drainage holes to allow excess water to escape.



## Monitoring Moisture

Regularly check the moisture levels in the soil by inserting your finger about an inch deep. Water when the topsoil feels dry. Lift pots to gauge their weight; lighter pots may indicate the need for watering.



## Temperature

Avoid using extremely cold or hot water; aim for water at room temperature to prevent shocking the plants and putting additional stress on the plant.



# Prevention & Intervention:

## Monitor Regularly

Inspect plants regularly for signs of pests, such as discolored leaves, webbing, or insect activity.



## Isolate Infected Plants

If possible, isolate plants that show signs of pests to prevent spreading to healthy plants.

## Leaf Inspection

Regularly inspect the leaves for signs of damage, discoloration, or unusual markings.



## Prune Affected Areas

If a specific part of the plant is heavily infested, consider pruning it to prevent the spread of pests to other areas.

## Soil Inspection

Check the soil for signs of pests or larvae, particularly if plants exhibit wilting or stunted growth.



## Insecticide

A gentle solution that targets soft-bodied insects like aphids and spider mites. We recommend Plant Therapy by Lost Coast.

## Cultural Processes

Maintain a clean and well-ventilated area, remove debris and fallen leaves that can harbor pests.



## Neem Oil

Acts as a natural insecticide and fungicide. It disrupts the life cycle of pests and prevents the development of fungal diseases.

## Quarantine New Plants

Inspect and quarantine new plants before introducing them to your grow area to prevent the spread of pests.

## Yellow Sticky Traps

Place these traps around the grow area to catch flying pests like fungus gnats.

## Companion Plants

Integrate plants that repel pests or attract beneficial insects, such as marigolds, basil, and sunflowers,



## Diatomaceous Earth

A fine powder made from fossilized diatoms creates a barrier that effectively dehydrates and controls crawling insects.

## Companion Insects

Introduce predatory insects like ladybugs or predatory mites to control pest populations naturally.



## Bacillus Thuringensis

BT serves as an eco-friendly intervention for caterpillar infestations while posing minimal risk to beneficial insects and the environment.



# Common Pests:

## SOIL DWELLING BUGS

THESE PESTS SPEND A SIGNIFICANT PORTION OF THEIR LIFE CYCLE IN THE SOIL OR ON THE GROUND.



**FUNGUS GNATS**



**ROOT APHIDS**

## CHEWING BUGS

THESE PESTS CONSUME PLANT MATERIAL BY CHEWING ON LEAVES, STEMS, AND FLOWERS.



**CATERPILLARS**



**JAPANESE BEETLES**



**GRASSHOPPERS**

## SUCKING BUGS

THESE PESTS FEED BY PIERCING PLANT TISSUES AND SUCKING OUT SAP, OFTEN CAUSING DAMAGE TO PLANT CELLS.



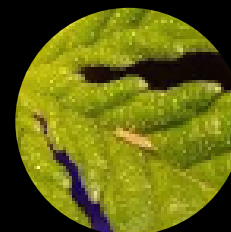
**APHIDS**



**SPIDER MITES**



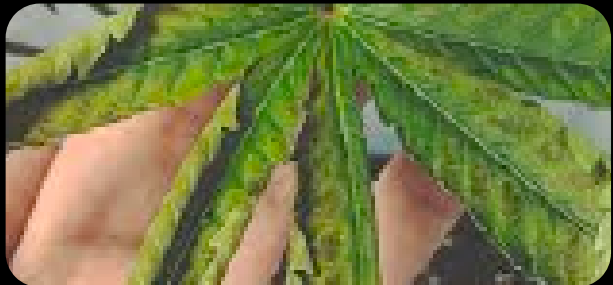
**WHITE FLIES**



**THRIPS**



# Plant Problems & Solutions:



## Nutrient Deficiencies

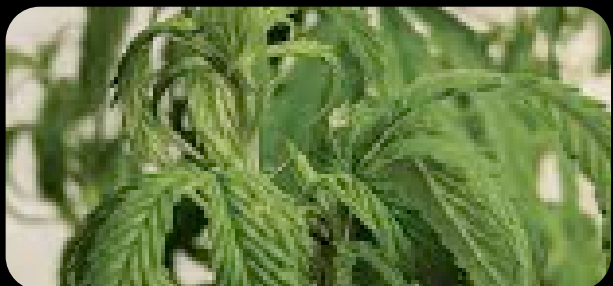
### **Causes:**

Over or under-watering, incorrect PH. If using a hydroponic method possible irrigation or supply line issues.

### **Solution:**

Adjust PH to the optimal range, adjust or amend nutrient solutions with appropriate fertilizers.

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## Over/Under Watering

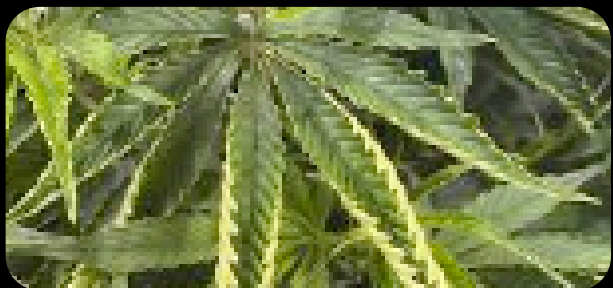
### **Causes:**

Poor soil drainage, inconsistent watering amount or frequency, spot watering

### **Solution:**

Adjust watering frequency based on the plant's needs, only water when topsoil is dry, ensure proper drainage. Aim for full saturation.

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## Light Stress

### **Causes:**

Too much or too little light, incorrect light spectrum

### **Solution:**

Adjust the light intensity and distance. Ensure the correct light spectrum for each growth phase. Check for light leaks when in flower.

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## Environmental Stress

### **Causes:**

High or low humidity, poor ventilation, damage from IPM

### **Solution:**

Adjust environmental conditions, provide proper ventilation. Check all lights, fans irrigation, IPM sprays.

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## Mold

### **Causes:**

High humidity levels, poor air circulation, wet conditions, poor ventilation.

### **Solution:**

Adjust humidity controls, improve air circulation, pruning & defoliation. Cut out any budrot to prevent spread.