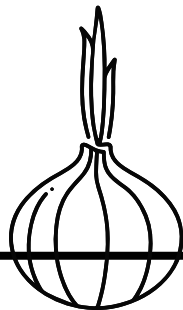


From Sets to Harvest - The Essential Guide to Growing Onions

By Tracey Everett
SowGrowHarvest.co.uk



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INTRODUCTION

Meet Tracey: Your Guide to Growing Onions

Tracey is a passionate Vegetable Gardener from Maldon, Essex, UK, who loves spending time in her Vegetable Garden with her raised beds surrounded by plants and wildlife. She enjoys inviting her daughter and husband to join her garden adventures and welcomes you to be part of her journey.

Her blog SowGrowHarvest.co.uk began as a personal record of her gardening progress but quickly evolved into a community hub where fellow vegetable enthusiasts can share ideas, photos & top tips.

Tracey's slogan, "Let's Grow Together," embodies her inclusive approach.

With a degree background in Environmental Science and over twenty years of keen interest in the environment, nature, and wildlife, Tracey brings a wealth of knowledge and experience to her gardening endeavours.

Tracey's gardening roots run deep, starting in childhood with her parents.

By day, Tracey works full-time in Finance, but she finds solace in her vegetable garden during weekends and evenings, switching off from work and reconnecting with nature.

Join Tracey in '**From Sets to Harvest - The Essential Guide to Growing Onions**' and embark on a delightful journey to mastering onion gardening.



Introduction to Growing Onions from Sets

The Onion is part of the Allium family and one of the most popular vegetables to grow worldwide. Onions are in the same family as Leeks, Chives and Garlic.

Onions are high in antioxidants and help with lowering blood sugar levels and help bone health.



Onion Nutrition

Onions are very low in calories and are mostly made up of Water 89%. They also contain carbohydrates, sugars and a small amount of digestible fibre. The Onion fibre contains Fructans which are prebiotic and beneficial to gut health. However they can cause digestive issues in those people sensitive to fibre.

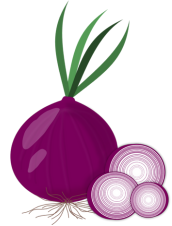
Onions contain a few major vitamins and minerals:

- Vitamin C – Good for the immune system,
- Vitamin B6 – Good for the formation of red blood cells,
- Potassium – Can lower blood pressure & good for heart health.
- Folate B9 – Good for cell growth.

Introduction to Growing Onions from Sets

Growing Onions

Onions can be grown from Seed or Sets.



Onion Seed

Onion Seed is sown in deep cell trays in an unheated greenhouse in March.

Onion Sets

An Onion Set is a young bulb. It would have been grown in the last season. One Onion Set bulb produces one Onion.

Onion Planting Timings

Onion Sets can be planted in Late February to March which are classed as '**Spring-Planting**' Onions.

Onion Sets can also be planted between September to November & these are classed as '**Autumn-Planting**' Onions.

The most popular type of Onions to grow from Sets are Spring Planted Onions as there are many varieties available.

Autumn Planting Onions are still worth growing for earlier harvests on a head start from overwintering.

Introduction to Growing Onions from Sets



Benefits of Growing Onions

There are a number of benefits to growing onions from sets, they are:

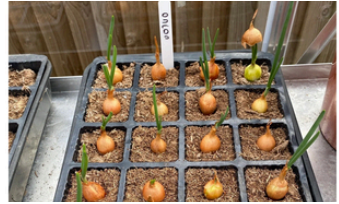
- Its quicker Growing Onions from Sets because they are already ahead of seed as they are immature bulbs that can be pushed directly into the soil.
- Onion sets are Heat Treated so they are less likely to Bolt (which is send up a flower spike and go to seed).
- Growing Onions from Sets means a shorter growing season and earlier harvest than Onion grown from Seed.
- Its easier and low maintenance to grow Onions from Sets. Onions from Seed will need a little more care and attention.
- Onion Sets are setup for a good crop and are more disease resistant.

Introduction to Growing Onions from Sets

Chapter 1 Summary

In this Chapter, you have learned:

1. About the Onion Family & its close relatives, Garlic & Leek.
2. Onion Nutrition and how beneficial digestible fibre is for gut health and how some people cannot eat onions.
3. The types of Vitamins and Minerals an Onion contains.
4. How Onions can be Grown from Seed or Sets.
5. Onion Planting Timings for Spring & Autumn.
6. Benefits of Growing Onions from Sets (immature bulbs).



Things to Do Next

- Choose to Grow Onions from Sets or Seeds.
- Choose one or a few Benefits of Growing Onions from Sets to encourage you to grow Onions this year or next year.

Selecting the Right Onion Sets

There are three most common colour varieties of Onion to choose to grow, depending on what flavour of onion you are looking to harvest and cook.



Brown & Yellow Onions

This Onion has either a brown or yellow skin with white or yellow layers inside. Brown & yellow Onions have a strong onion flavour from the high sulphur content and are used in dishes like French Onion Soup. They are a good all round onion for cooking.



Red Onions

Red Onions have a mild to spicy fresh flavour which makes them perfect for salads.

Red Onions get their red colour from anthocyanins which are compounds that also colour blueberries. This is linked to health benefits.



White Onions

White Onions have white papery skin and have a mild flavour due to the high sugar and low sulphur content. These types of onions can be used raw because of their mild taste. White onions are often used in coleslaw or fermentation dishes.

Selecting the Right Onion Sets

There are also a few other different Onions which you may want to grow.



Sweet Onions

Sweet Onions are larger and flatter than Brown Onions, they have a lighter skin and contain extra sugar and ideal for making Onions rings.



Shallots

Shallots are brown skinned and small tear drop shaped onions. They have a very intense flavour and are made up of multiple layers. They multiply when grown into smaller bulbs, similar to Garlic.

Shallots are best minced and used in salad dressings or braised in casseroles or roasted in the roasting pan with chicken.

Choose Your Onion Varieties – The Essential List

Autumn Planting Varieties - Onions & Shallots

Onion Variety	Colour	Type	Features
Electric	Red	Autumn Planting	Elongated with red ringed flesh.
Red Winter	Red	Autumn Planting	A heavy cropper.
Red Baron	Red	Autumn Planting	Strong flavour, hardy & stores well.
Snowball	White	Autumn Planting	Very mild flavour.
Radar	Brown	Autumn Planting	Very good flavour & excellent storer.
Senshyu	Brown	Autumn Planting	Hardy Japanese variety globe shaped with white flesh.
Autumn Champion	Brown	Autumn Planting	Best Performer, traditional variety.
Troy	Brown	Autumn Planting	Japanese cross variet. Hardy & good for wet weather.
Shakespeare	Brown	Autumn Planting	British bred with high yields.
Jemor	Shallot	Autumn Planting	AGM Merit, pink flesh, sweet taste.
Griselle	Shallot	Autumn Planting	Spicy & high yields.
Longor	Shallot	Autumn Planting	Elongated with sweet taste.
Picasso	Shallot	Autumn & Spring Planting	Top Class variety, bolt resistant.

Choose Your Onion Varieties – The Essential List

Spring Planting Varieties - Onions

Onion Variety	Colour	Type	Features
Karmen	Red	Spring Planting	Sweet, with white flesh.
Sturon	Brown	Spring Planting	AGM Merit, great flavour, medium onions.
Stuttgarter	Brown	Spring Planting	German bred, large onions but mild. Great storers.
Stuttgarter Riesen	Yellow	Spring Planting	Bolt resistant, flat shape, German heirloom, spicy.
Hercules	Brown	Spring Planting	Large onions, strong flavour, bolt resistant, great storer.
Keravel Pink (Rossanna)	Sweet Onion	Spring Planting	French pink onion, sweet flavour.
Setton	Brown	Spring Planting	Very hardy, bred to be better than Sturon. AGM Merit.
Centurion	Yellow	Spring Planting	Semi round onions, great flavour, great storers.
Cupido	Yellow	Spring Planting	Sharp crisp taste, high yield.
Bistro	Brown	Spring Planting	Sweeter & milder than most onions.
Pink Panther	White	Spring Planting	Pinky white skinned, French Variety, mid sweet flavour.

Choose Your Onion Varieties – The Essential List

Spring Planting Varieties - Shallots

Onion Variety	Colour	Type	Features
Golden Gourmet	Shallot	Spring Planting	Heavy Cropping, larger bulbs than normal. Brown skins.
Red Sun	Shallot	Spring Planting	Red spicy shallot that stores well.
Yellow Moon	Shallot	Spring Planting	Great flavour, high yield, brown skinned.
Mikor	Shallot	Spring Planting	French shallot, pink flesh, mild, good storer.
Picasso	Shallot	Spring & Autumn Planting	Top class shallot, bolt resistant, red tinged flesh.



Selecting the Right Onion Sets

Chapter 2 Summary

In this Chapter, you have learned:

1. The 3 most common types of Onion in colour and a few extra types you might want to grow as well.
2. Learning about the characteristics of Brown or Yellow, Red & White skimmed, Sweet and Shallot Onions.



Things to Do Next

- Choose the colour/s of Onions you would like to grow.
- Use the Bonus Chapter – **Choose Your Onion Varieties – The Essential List** to find the variety perfect for you.
- Purchase your Onions Sets in either August to September for Autumn Planting or February for Spring Planting.
- Keep your Onion Sets in a cool, dry, dark place until you are ready to plant them.



Preparing the Soil

Onions will need good soil with lots of nutrients and good drainage. The soil needs to be prepared at least 6 weeks before planting out your onions in Raised Beds.

Where to Grow Your Onions

Raised Beds

Raised Beds are well suited to Growing Onions as their soil is often loose and well drained.



Containers

Onions can be grown in a Large Container of compost. Raise the container off the ground with pot feet so the drainage is good.

Onion Soil Requirements

Onions need a fertile soil so the soil in your raised beds or borders may need to be replenished with nutrients before planting.

Onions are shallow rooted so they will need nutrient rich soil in the top 5 inches of your Raised beds or container.

Soil Improvers

There are two methods of adding nutrients before starting to grow onions from sets:

1. **Multi Purpose Compost** – You will need to add 2 to 3 inches of compost so there will be a boost of nutrients to get the small bulbs growing.
2. **Well Rotted Manure (not Fresh Manure)** – A good layer of well-rotted manure will need to be added to the soil and dug in. You will need to wait a 6 weeks before planting, otherwise it will burn your onion bulbs in the ground when planted.

Preparing the Soil

Growing Conditions – Onions Love

- ✓ Fertile loose soil with added nutrients.
- ✓ A warm sunny location in the Vegetable Garden.
- ✓ Soils with good drainage.
- ✓ Watering in dry conditions.

Growing Conditions – Onions Hate

- ✗ Onions hate their roots being in waterlogged soil as the bulbs will rot.
- ✗ Onions do not like acidic soil.
- ✗ Onions do not like heavy clay soil due to waterlogging.
- ✗ Onions are not partial to growing in the shade.
- ✗ Onions hate lots of weeds.



Preparing the Soil

Chapter 3 Summary

In this Chapter, you have learned:

1. Onion Soil Requirements, that they will need a fertile and well drained soil.
2. About Soil Improving – Two Methods to boost the nutrients in the soil for growing onions from sets.
3. Growing Conditions that Onions Love like a sunny location, loose soil and good drainage.
4. Growing Conditions that Onions Hate – They don't like waterlogging, acidic soil or growing in the shade.

Things to Do Next

- Decide Whether to Grow Onions in a Container or Raised Bed.
- Find a place in your garden for a Container or raised beds to plant your Onions from Sets. Use **Growing Conditions that Onions Love** to help you.
- Check your Soil in your Raised Beds, if crops having been growing, it will need to be replenished.
- **Raised Beds** – Purchase Compost or well-rotted manure. Remember to prepare the soil at least 6 weeks before planting.
- **Containers** – Buy Compost to fill your Container.



Planting Onion Sets

Onion Sets can be planted directly in the ground or if the ground is too wet, they can be started off in Root Cell trays in an unheated greenhouse.

My Hands On Experience

Last year I planted Spring Planting Onions bulbs directly into the soil in Spring, unfortunately it was an uncharacteristically wet Spring and the soil was waterlogged quite heavily. My onions began to rot in the ground but there was nothing I could do to save them.

This year I tried the method of planting Spring Onion bulbs in cell trays in the unheated greenhouse in March.

Lucky I did as it was another wet March (but not as wet as the previous year) and had I planted them in the ground, they definitely would have rotted again. It was easy to start off the onions in cell trays and as they were undercover, it was easy to monitor when to water the soil.



Planting Onion Sets

Autumn & Spring - Onion Timings

These instructions are for both Autumn and Spring planting Onion Sets.



Autumn Planting Onions

Buy or pre-order Onion Sets: August to September.

Plant Onions in cell trays or containers: September to October.

Transplant Onions in the Ground: March.

Harvest Onions: June.

Spring Planting Onions

Buy or pre-order Onion Sets: February.

Plant Onions in cell trays or containers: March.

Transplant Onions in Ground: Mid April.

Harvest Onions: August.



Planting Onion Sets

How To Grow Onions in Cell Trays in 6 Easy Steps

You will need:

1. Buy Onion Sets from the garden centre or online.
2. Cell Trays with 24 cells to a tray or a Large at least 30L container.
3. Peat Free compost.
4. An unheated greenhouse or mini greenhouse with cover.

Step by Step Planting Instructions

1. After you have bought your Onion Sets, open the bag and turn out the onions. Check and discard any which have mold on them.
2. Fill your cell trays or container up to the top with compost.
3. Tap the cell tray or pot on a bench or the ground to settle the soil in the trays or pots.
4. Push one onion bulb in the centre of the cell so it stands upright. The onions tip should point to the sky. It's only the bulbs bottom that sits in the soil.
5. Plant all the bulbs in your cell tray or container. In a container, they should be planted at least two inches apart.
6. Water well and leave the cell tray or container in an unheated greenhouse.

Planting Onion Sets

How To Grow Onions in Cell Trays in 6 Easy Steps



[Video Link: How To Plant Onions in Cell Trays](#)

Planting Onion Sets

Transplanting Onion Sets in a Cell Tray or Pot into the Ground

The Soil Preparation for an Onion bed needs to be completed 6 weeks before planting your onions out in it. This is due to well rotted manure burning your plants.

Planting Out Timings:

1. Autumn Planting Onions – Plant Out in March.
2. Spring Planting Onions – Plant Out in Mid April.

You Will Need:

1. Your tray of onions sets planted in cell trays.
2. A Trowel for planting them in the ground.

Step by Step Instructions

1. Remove the onions (with roots attached in the compost block) from your cell trays.
2. Lay the onions out on top of the soil on your Raised Bed so you know where to plant them. They should be about 4–6 inches apart from one another.
3. Dig a small hole and place the Onion root block into the hole. The key is not to bury the onion under the ground. The soil around the onion should be loose.
4. Repeat the above steps 1–3 to plant all the other onion plants, 4–6 inches apart from one another.
5. Water well.

Planting Onion Sets

Transplanting Onion Sets in a Cell Tray or Pot into the Ground



[Video Link: How To Plant Onions outside in Raised Beds](#)

Planting Onion Sets

Chapter 4 Summary

In this Chapter, you have learned:

1. My Hands on Experience in Growing Spring Planted Onions with them rotting in the ground on my first attempt so I tried a different method of planting Onion Sets in cell trays first before planting in the ground.
2. Understanding the Timings on buying Onion Sets, Planting, transplanting and harvesting.
3. Step by Step Planting Instructions on How to Plant Onion Sets into Cell Trays, plus a weblink to my Video.
4. Step by Step Planting Instructions on How to Transplant Onions into the ground of Raised Beds or Containers.
5. A Demonstration Video on how to Plant and Transplant Onion Sets (please click on web link).

Things to Do Next

- Plant Your Onion Sets in Cell Trays or in the Ground.
- Care for your Plants in the unheated Greenhouse for one and a half months.
- Transplant Your Onions in cell trays into the ground and water well.
- Complete your Veg Garden Journal on planting dates and any notes.



Caring for Your Onions

Understanding Watering Requirements of Onions

Watering is quite important with Onions because their roots are very shallow in the soil. Therefore they will experience drought conditions quite quickly, if the soil is baked in the sun and not watered for days. Also Onions do not like waterlogged soil and too much water can quickly become fatal for the onion as it will rot in the soil.

Onion Watering Techniques

Onions like a delicate balance of watering as they need the water to swell the bulbs throughout their growing lives.



Watering Once a Week

Water Once a week consistently.



Water in the Morning

Water in the Morning so the water doesn't evaporate off the plants & soil in the sun.



Water Slowly

Water Slowly too see how much water soaks into the soil.



Water 2.5cm Deep

An Onion requires water to a depth of approximately 2.5cm deep in the soil.



Water at Soil Level

Avoid watering from above as this can cause fungal diseases. Water at Soil level.



Try not to Overwater

Onions have shallow roots. If there are puddles, this is too much water.



Don't let the Soil Dry Out

Don't let the soil dry out too the point of cracking. This will stress the Onion Plant.



Stop Water when Bulb Swells

Stop Watering altogether once the Bulbs have Swollen up in June (Autumn type) August (Spring type).

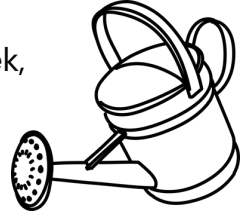
Caring for Your Onions

Top Tips on Watering Onions

Normal Heat = Water Onions once a week, if there has been no rain.

Extreme Heat = Water Twice a week in extreme continuous heat.

Top Tip – Do not allow the soil to become very dry as this hurts the Onion roots.



Onion Soil Requirements

Overwatering can also cause a few problems with the plants. If you see the leaves yellowing at the tips, the onions are being watered too much. In this instance, cut back the watering to once a week.

Signs of Overwatering Onions

- **1st Sign** – Pale or yellowing tips of the leaves – You can still save the Plant. Stop watering often.
- **2nd Sign** – Limp leaves suggests overwatering as the plant cannot take up all the water in the soggy soil – Stop watering to let the plant dry out & the plant may recover.
- **3rd Sign** – Soggy Leaves that fall over flat, this suggests a waterlogging problem in the soil. At the top of the bulb, the stem may turn brown and grey felt like mold will be the first signs of rotting on the bulb, due to too much water – Severe – Plant Unlikely to recover.

Caring for Your Onions

Unfortunately your Onions may be subject to the wet weather if planted directly into the ground. There is a remedy to combat wet weather and give your Onions a chance to survive. The Solution I have experienced is planting them in cell trays in an unheated greenhouse. See Page 15 – Chapter 4 – Planting Onions – How To Grow Onions in Cell Trays in 6 Easy Steps.

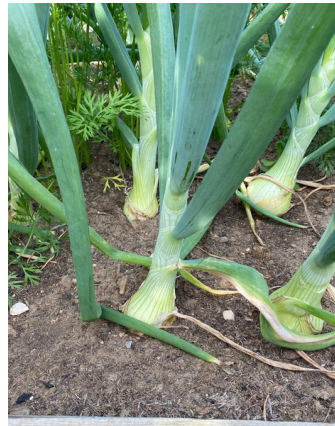
Chapter 5 Summary

In this Chapter, you have learned:

1. The importance of having a regular schedule for watering.
2. The Onion Watering Techniques like avoid watering from overhead, water once a week and don't let the soil.
3. The Signs of Overwatering so that you can care for your Onions correctly and not let the soil dry out around the onions roots.

Things to Do Next

- Draw up a Weekly Watering Schedule.



Fertilising Your Onions

There are 3 important nutrients that Onions need to grow to their full potential. Onions require these 3 different nutrients at different times in their growth period.



Planting Stage

Onions will need **Nitrogen** to start with from the well rotted manure and/or compost in the soil for the boost to start growing the green leaves.

Bulb Growth

During growing, Onions will need **Phosphorous** to produce the stem & for the bulb formation. **Potassium** is also needed for cell growth to enlarge the Onion bulbs.



Blood Fish & Bone Meal, in a powder form can be added in a little trough 2 inches away from the onions & covered back with soil. The fertiliser could burn the plant if it is applied too close.

Lead up to Harvest

During the nearly harvesting stage, no more nitrogen should be added because they growth needs to be in the bulb and not the leaves.

Phosphorus is still needed for the bulbs development.



Fertilising Your Onions

Understanding Nitrogen, Phosphorous & Potassium

There are three nutrients that plants need in different quantities to grow well and that give good disease resistance.

Nitrogen



Nitrogen is an essential part of plant growth and needed for the production of green leaves. Nitrogen is absorbed through the plants roots but can also be washed out of the soil as it is water soluble.

If the Plant isn't getting enough Nitrogen, it will show the following Signs:

- Slow Growth,
- Pale Green to Yellow and then White Leaves,
- Smaller leaves and shoots,
- Smaller fruits,
- Premature Leaf Drop,
- Leaves turning darker red in autumn.

Fertilisers High in Nitrogen: Well rotted Manure, Compost.

Fertilising Your Onions

Understanding Nitrogen, Phosphorous & Potassium

There are three nutrients that plants need in different quantities to grow well and that give good disease resistance.

Phosphorous



Phosphorous is required for good Onion Bulb growth. It is also required for stem and stalk strength and development.

If the Plant isn't getting enough Phosphorous, it will show the following Signs:

- Slow Plant Growth or stunted growth,
- Leaf distortion, leaf drop or reduced leaf size,
- Poor Root development,
- Purple veins on leaves,
- Leaves turn dark green-blue,
- Poor flowering and small crop.

Fertilisers High in Phosphorous: Blood, Fish & Bone Meal, Banana Skins.

Fertilising Your Onions

Understanding Nitrogen, Phosphorous & Potassium

There are three nutrients that plants need in different quantities to grow well and that give good disease resistance.

Potassium



Potassium is required for cell growth, root growth, photosynthesis and movement of water and nutrients around the plant.

If the Plant isn't getting enough Potassium, it will show the following Signs:

- The Plant will have stunted growth,
- Poor flowering & fruiting,
- A small to no crop yield,
- Yellow or Purple Leaf Tints and browning at edge of leaves.

Fertilisers High in Potassium: Liquid Seaweed, Dried Kelp Meal, Potash.

Weeding Your Onions

Weeding is an important task to complete as the weeds will be trying to take up the same nutrients and water as the Onion needs to survive.

Most weeds are airborne seeds and when they hit fertile soil their roots take hold. To maintain your vegetable beds, check for weeds in the raised bed or containers every week whilst watering.

Fertilising Your Onions

Chapter 6 Summary

In this Chapter, you have learned:

1. An Introduction to Fertilising your Onions at the planting, mid growth and harvesting stages of the Onion Growing Season.
2. The 3 Main Nutrients that are essential to Onion Growth.
3. The Signs of nutrient deficiencies to observe when growing onions.
4. The Types of fertiliser to apply for the 3 different nutrient deficiencies.
5. The importance of Weeding your Onion Bed so as not to loose the nutrients and water to weeds.

Things to Do Next

- Draw up a Weekly Weeding Timetable to add to your Watering Schedule.
- Check you have the relevant fertilisers for the growing season.



Dealing with Pests & Diseases

Common Onion Pests

- Thrips
- Onion Fly
- Allium Leaf Minor

Thrips



Thrips are yellow or yellowish brown small flies that lay their eggs on the green leaves of the plant. The nymphs hatch and feed on the green leaves, pierce the plant cells and suck out the goodness.

Thrips – Organic Pest Solutions

Thrips leave silvery patches on the leaf when they feed on the leaves, which doesn't recover and goes brown. The patches join together to make whitish streaks on the leaves and the leaves can become distorted.

Thrips are active from April to September. Thrips usually arrive when the onion bulb swells up and can continue feeding on the onion layers leaving scars and reducing the attractiveness of the bulb.

Signs of Thrips Damage to Plants

- Spray them off the plants with high pressure water from a hose pipe.
- Swish or rub them off the plant leaves.

Dealing with Pests & Diseases

Common Onion Pests

Onion Fly

This small fly looks like a house fly but is grey (approx. 5–7mm long) and seeks out the onion family plants (leeks, shallots, garlic, chives and onions) and lays its larvae at the base of the plant in the soil.

The white maggots usually about 1cm long hatch from the soil and eat into the onion bulbs, effectively killing it from the inside.



Signs of Onion Fly Damage to Plants

The first signs of onion fly damage is yellow then brown and damaged stems early in the growth process when the onion is still young. Other signs are rotting stems and maggots.

Onion Fly Pest Solution – None

Unfortunately this pest will almost certainly kill your onion plants because once the maggots get inside the onion bulbs, they have destroyed the inner layers of your onions.

Onion Fly Prevention

- Dig up the maggot cocoons from the soil.
- Net your onions from planting them in the ground so the flies can't get to the Onions or the soil.
- If any flies get under the netting set them free.
- Crop Rotation so that you change the soil and location you plant in.

Dealing with Pests & Diseases

Common Onion Pests

Allium Leaf Minor

This is a tiny fly approximately 3mm in length, they lay eggs on the plants in early Spring (March to June). They eat the inside of the leaf which is where the term 'Leaf Minor' originates and the larvae which are brown bury into the leaves and stem.

The long streak of white dots to the inside of the leaf is very visual and causes other infections in the plant as the plant becomes weak. The Allium Leaf Minor Pest will actively seek out plants that belong to the Onion Family.

Signs of Allium Leaf Minor Damage to Plants

- Leaf Distortion and twisting as the leaves are attacked by the fly and larvae.
- White lines running down the stem with brown pupae buried in it.
- Lines of white dots along the foliage.
- Rotting in bulbs ready to harvest in August.

Allium Leaf Minor Pest Solution



- Insect Mesh to cover the plants during the egg laying period of March & April. Also they are active in September to November.
- Crop Rotation by moving where the plants grow, you may be able to avoid the pest problem for the next 3 years.

Dealing with Pests & Diseases

Common Onion Diseases

- Botrytis Leaf Blight
- White rot
- Fusarium Basal (Crown) Rot
- Purple Blotch
- Rust
- Pink Root Rot
- Neck Rot
- Downey Mildew



Botrytis Leaf Blight

Botrytis Leaf Blight is a fungus that loves wet leaves, humid and very wet conditions. Sometimes the wet conditions can be caused by overwatering. This disease is a soil fungus that lives on debris on top of the soil.

Signs of Botrytis Leaf Blight Damage to Plants

- White oval small spots which can have a silver halo round them over the entire length of the leaves.
- Leaves shrivel as the leaves are damaged from the fungus and the whole leaf dies within 5–12 days of infection.
- Stunted bulb growth and that will give a reduced harvest.

Botrytis Leaf Blight Solutions

- Make sure the onions are planted in well drained soil so the water doesn't sit on the soil as these are the perfect conditions for fungus to grow and spread.
- Remove Plant debris on top of the soil that may harbour the disease.
- Crop Rotation so you don't grow the onions in the same soil for at least 3 years.

Dealing with Pests & Diseases

Common Onion Diseases



White Rot

White rot is a fungal disease which is soil-borne and it is quite severe as it can stay in the soil for years. This disease can cause problems for Onions, Garlic & Leeks from Mid Summer to Autumn.

Signs of White Rot Damage to Plants

- Yellowing Leaves and Distortion of leaves,
- The whole plant will become loose in the soil because the diseases attacks the roots and they decay.
- The fungus will infect the roots which then rots the bulb.
- A white and fluffy fungus will appear on the bottom of the onion bulb which will gradually turn black.

White Rot Solutions

- Crop Rotation but as the fungus lives in the soil and only attacks the onion family, Onions, Leeks and Garlic should not be grown in the same area for a number of years.
- Removal of soil from the area and replenishment of new soil and compost. The fungus remains dormant in the soil until a member of the onion family is grown again in the infected soil. The only method is to remove the soil and replenish with new soil.

Dealing with Pests & Diseases

Common Onion Diseases

Fusarium Basal (Crown) Rot

Fusarium Basal (Crown) Rot is a soil-borne fungal disease affecting the Allium Family of plants. The fungus stays in the soil overwinter and infects onions, garlic and leeks at any growth stage. The fungus stays in the soil for years so it is difficult to remove.



Signs of Fusarium Basal (Crown) Rot Damage to Plants

- Yellowing appears on older leaves,
- Rotting roots leads to little or no roots.
- Bulbs will be small and may rot when stored.

Fusarium Basal (Crown) Rot Solution

- Solarizing the soil – a method of laying plastic over the soil to encourage high temperatures in the soil to eventually kill off the soil-borne fungus.

Dealing with Pests & Diseases

Common Onion Diseases



Purple Blotch

Purple Blotch is a fungal disease that is air-borne. Spores are blown from far and wide and overwinter in soil debris. The disease infects only plants from the Allium family and it loves a hot wet summer and attacks wounded plants.

Signs of Purple Blotch Damage to Plants

- Lesions on older leaves that turn brown to purple. Yellow rings often surround the lesions.
- Yellow, Brown and wilting leaves.
- Bulbs are softer and may turn dark reddish purple and will rot in storage.
- Crops will be reduced due to disease attack.

Purple Blotch Solution

- Correct Plant Spacing will create more air flow in the planting area,
- Crop Rotation – not to grow onions in the same soil for at least 3 years.
- Removal of Soil debris before planting bulbs.
- Harvest in dry weather to avoid damage to the onion necks.
- Make sure onions have dried fully before storing.

Dealing with Pests & Diseases

Common Onion Diseases

Rust

Rust appears on Onions, garlic and leek leaves as bright orange or red spots giving the appearance of rust. The lesions will then turn black as the infected area is diseased.



Rust appears in early summer during high humid conditions. Rust is a fungal disease and spores are carried by the wind and by rain splashes.

Signs of Rust Damage to Plants

- Orange or brown raised spots that look like rust on young leaves,
- Blotching to the leaves means the plant cannot photosynthesise due to lack of green leaves.
- Leaves may drop but the Onion is still perfectly edible as it only affects the leaves.
- May form smaller onion bulbs.

Rust Solution

- Don't use too much nitrogen fertiliser when preparing the onion bed for growing.
- Remove all parts of onion skin, leaves and roots from the soil at harvest time.
- Create airflow between your plants by removing weeds and spacing correctly.

Dealing with Pests & Diseases

Common Onion Diseases



Pink Root Rot

This is a soil-bourne disease which can cause the onions roots to rot or produce pink roots. The fungus goes into the roots directly from the soil and is spread by water.

Signs of Pink Root Rot Damage to Plants

- Smaller sized bulbs or shrivelled bulbs,
- Slow growth,
- Yellow twisted leaves,
- Rotting smell from the soil,
- Slimy stems.

Pink Root Rot Solution

- It is unlikely that the plant will survive if the rotting smell and slimy onion neck occurs.
- If the plant still has roots, it may survive by growing in fresh soil.

Dealing with Pests & Diseases

Common Onion Diseases



Neck Rot

Neck rot is a fungal disease that is wind-borne and the spores are carried in cool or wet weather

Signs of Neck Rot Damage to Plants

- Yellow leaves,
- Bulbs go mouldy and neck goes slimy.
- Grey Mold appears on bulbs,
- Black sections appear at the top of the bulb.
- Sometimes Mold appears after the bulb has been in storage for a 2–8 weeks.

Neck Rot Solution

- To prevent neck rot, try growing heat treated onion sets.
- To prevent rotting bulbs, dry out the bulbs completely before storing.

Dealing with Pests & Diseases

Common Onion Diseases



Downey Mildew

This is a white and powdery fungus that forms when humid summer conditions and wet conditions prevail.

It loves those conditions to form on the leaves and later will infect the bulb if left unattended. The fungus is moved by splashes of rain and the wind and is known as a water mold.

Signs of Downey Mildew Damage to Plants

- A powdery white appearance on affected leaves,
- Stunted leaf growth, leaves turn yellow and die off,
- Closely spaced bulbs can be affected.

Downey Mildew Solution

- Plant Onions at the correct spacings.
- Make sure to keep up to date with the weeding, as a weed may be harbouring the disease.
- Plants should not be composted as the disease won't be eradicated in the compost bin.
- Grow Onion Varieties which are resistant to Downey Mildew such as Santero F1 and Hylander F1.

Pests & Diseases

Quick Glance List

Pest or Disease Name	Pest or Disease Description	Main Symptom	Solution	Time of Year Active
Thrips – Pest	Yellow brown small flies	Silvery patches on leaves	Squish or Spray water	Apr – Sept
Onion Fly – Pest	Small grey house fly type	Yellow, brown damaged stems.	None. Prevention Only.	May – Aug
Allium Leaf Minor – Pest	Tiny fly 3mm long.	Long streak of white dots with small brown dots.	Insect mesh & crop rotation	March – Apr & Sep – Nov
Botrytis Leaf Blight	Soil fungus.	White oval spots with silver halo along leaves.	Well drained soil, remove plant debris, crop rotation	Wet Humid Weather
White Rot	Soil fungus.	Yellow & distorted leaves, root infection.	Crop rotation, soil borne for years.	June – Oct
Fusarium Basal Rot	Soil fungus.	Yellowing older leaves, rotting roots.	Solarizing soil – kill off by covering soil.	June – Aug
Purple Blotch	Air–borne fungus.	Brown & purple lesions with yellow rings on old leaves.	Crop rotation, spacing & air flow, harvest in dry weather.	Wet Humid Weather
Rust	Wind & rain splashes fungus.	Orange & brown spots on leaves.	Reduce nitrogen fertiliser on preparing.	June – Oct
Pink Root Rot	Soil fungus.	Small stunted plants, roots are pink & die off.	Well drained soil, & crop rotation.	Wet Humid Summers.
Neck Rot	After storage fungus.	Onion neck turns grey with Mold.	Well ventilated storage, rain late in season.	After harvest.
Downey Mildew	Wind & rain splashes fungus.	Powdery white leaves. Stunted growth.	Grow resistant varieties. Air flow.	Wet Humid Weather.

Dealing with Pests & Diseases

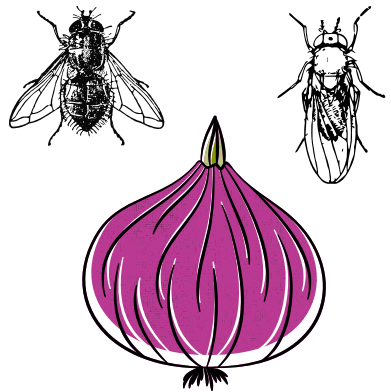
Chapter 7 Summary

In this Chapter, you have Learned:

1. The Signs & Solutions of Common Pests like Thrips and Onion fly.
2. The Signs & Symptoms of Common Diseases like rust and root rot,
3. Times of year when the Pests & Diseases are active on the Quick Glance Checklist.

Things to Do Next

- Keep the Bonus Chapter handy – **Pests & Diseases Quick Glance List** (page 41) so that you can look up any pests or diseases that attack your onions.
- Keep notes about pests and diseases in your veg journal.



Harvesting & Storing Onions

How do you know when Onions are Ready for Harvest?

- Your Onions have swelled up and they are sitting on top of the soil.
- The leaves fold over (bend) at the stem by the top of the bulb and the leaves lay flat on the soil.
- This process usually happens in early to mid August, if you started your onions in cell trays in March.

How to Harvest Your Onions

You will need:

- A hand fork or a trowel,
- A Drying rack (see page 44)



Step by Step Instructions

- Use your hand fork to dig out the onion from the ground. Take care not to pierce the onion with the hand fork.
- You may need to wiggle the fork, to get the prongs under the roots to release their grip on the soil.
- If your Onions still have green leaves, they will need to be dried on a rack in a cool and rainproof place, until the leaves go brown and crispy.
- You can eat the onions now or when you need them.

[Video Link - How to Harvest Onions](#)

Harvesting & Storing Onions

How to Dry your Onions

If your Onions leaves are still green, you will need to Dry your Onions until the leaves go brown and crispy and then the leaves can be cut off a few inches above the top of the bulb and they can be stored in a cool, dark place.

What is an Onion Drying Rack?

A drying rack is a place to dry onions on and it needs to have air flow around and through it so the Onions and leaves dry and do not go mouldy.

Some examples of drying racks are:

- Wooden Trellis,
- Expandable willow trellis,
- Shoe rack, with slats or bars,
- Wire mesh sheet.



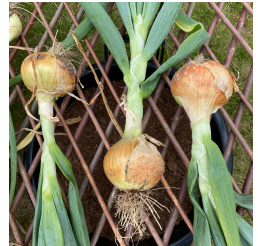
Harvesting & Storing Onions

Why Do You Need to Dry Onions?

The purpose of drying the onions is so they can be stored for months indoors, without rotting or going mouldy.



Any presence of moisture in the plant (not the bulb as it is protected by an onion skin, unless diseased) will turn an onion bulb mouldy inside a bag or storage pot inside your house, shed or garage.



With green leaves, there will still be moisture in the plant cells that make up the stem and leaves.

To remove the moisture, Onions are dried in a place with good airflow to evaporate the water from the plant cells and dry them out.



When the Onions leaves have gone from green to yellow to brown and crispy, there shouldn't be any moisture left in the stem, so the brown leaves can be cut just above the onion bulb to store inside.

Harvesting & Storing Onions

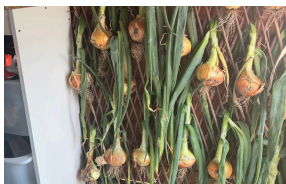
Onion Drying Locations

Raised Bed



You can leave your harvested onions in the raised bed to dry out in the sun for a few days (make sure no rain is forecasted).

Drying Rack



You can have drying racks laid horizontal or vertical to dry your onions on in the garage, shed or other storage area where it is dry and cool.

Braiding Onions



You can Braid Onions by tying up their stems with string and hanging them up to dry. Here is a [YouTube video on How to Braid your Onions.](#)

Harvesting & Storing Onions

Chapter 8 Summary

In this Chapter you have learned:

- 1.The Signs that Onions are Ready to Harvest,
- 2.How to Harvest Onions from the ground,
- 3.Why you should Dry Onions before Storing,
- 4.How to Make Your Own Drying Rack or use a similar rack,
- 5.Locations to Dry Your Onions,
- 6.Onions that are dried properly can be stored for 1 year.

**Congratulations!
on Harvesting your Onions.**

Things to Do Next

- Check your Onions are completely dry with brown and crispy leaves before storing in breathable mesh Onion bags.
- Your Onions are ready to use in the Kitchen for cooking. Research some recipes to use up your Onion Harvest.
- If you enjoyed Growing Onions, buy Sets and Grow again Next Year.



Troubleshooting Common Problems

Other Influences that can affect Onions Growing.



Weather

If the weather on a certain summer has been cool temperatures and hardly any sun, this can affect the bulb formation by delaying it starting.



Bolting or Flowering

Onions bolt when they are under stress, they will send up a shoot in the centre of the leaves that will have a flower on.

When these appear, cut them off as far down the stem as possible. Unfortunately your onion may be smaller than other onions and may not be able to store for long periods. This onion is best eaten from the ground and not stored.

Bolting occurs when the plant deems the conditions of sunlight, watering or fertilising where not correct or that the size of the plant is too small. Its like natural selection in the onion world.



Growing the Wrong Types at the Wrong Time of the Year

Growing Spring planting bulbs in the Autumn would be an issue as Spring bulbs are not as hardy and would not survive the winter.

Troubleshooting Common Problems

Other Influences that can affect Onions Growing.



Spacing & Depth Issues

If you want Large onions, you will need to choose a large variety, prepare your soil with compost before planting & leave the correct spacing between bulbs so they have enough room to swell.

Onions should be planted 4 to 6 inches apart to give them room to produce a larger bulb. Onions should be planted in the soil with their tips showing and not buried, otherwise they may rot before the shoot has started forming



Lack of Water

Onions do not like drying out, their roots are very shallow and will need to take up the water from near the surface of the soil. Water once a week.



Overwatering

Onions do not like sitting in waterlogged soils. They are composed of mostly water in their cells and layers so the Onion will rot in waterlogged soil.

Overwatering may be caused by the weather, you can combat this by delaying planting outside and plant in cell trays instead. See Page 17.

Troubleshooting Common Problems

Other Influences that can affect Onions Growing.



Lack of Fertilising

As Onions roots are so shallow, they will have some nutrient deficiencies during their growth seasons.

Onions will need a Nitrogen fertiliser at the point of planting to boost the shoot and leaf growth. Then they require a general purpose fertiliser in mid growing season.



The Allium Family are Poisonous to Some Animals

Please note Onions, Garlic, Chives and Leeks can be poisonous to dogs and cats, if they try to digest them. The high sulphur content can cause stomach upsets. If dogs & cats eat too much it could be fatal.

Troubleshooting Common Problems

Chapter 9 Summary

In this Chapter, you have learned:

1. Other Influences that affect the Growth of Onion Plants.
2. Spacing the bulbs when planting is important to growing large onions.
3. Lack of Water & Overwatering issues can severely affect the performance of Onions.
4. Lack of fertilisers could hinder the Onions growth,
5. A Reminder that the Onion family could cause harm to some animals if ingested.

Things to Do Next

- **SUBSCRIBE** to **SowGrowHarvest.co.uk** to get Top Tips about Growing all types of Vegetables including Onions.
- **FOLLOW:**
- **@traceysowgrowharvest** on Threads & Instagram,
- **@traceybjustme** on X / Twitter.
- **FEEDBACK or Contact Me by Email:**
traceyeverett@sowgrowharvest.co.uk



Final Thoughts

Thank you for taking the time to read "The Essential Guide to Growing Onions." I hope this eBook has equipped you with the knowledge and confidence to grow your own delicious onions at home. Whether you're a seasoned gardener or just getting started, understanding the intricacies of onion cultivation can make a significant difference in your gardening success.

Your Onion Growing Journey

Remember, every gardener's journey is unique, and it's perfectly fine if you encounter some challenges along the way. Use this guide as a reference and don't hesitate to experiment, learn from your experiences, and adapt to your unique growing conditions.

Stay Connected

I would love to continue this journey with you. Don't forget to sign up for my blog, "SowGrowHarvest.co.uk", for more tips, ideas, and inspiration on growing vegetables. By joining our community, you'll receive regular updates and valuable resources to help you every step of the way.

Share Your Success

Lastly, I invite you to share your onion-growing stories and successes. Whether it's a great harvest or a lesson learned, your experiences can inspire and educate others in our community. You can reach out through the blog or share your journey on social media using **#SowGrowHarvest**.

