

Tahoe Fruit & Vegetable Workshop Series

SPRING PLANTING OF ONIONS AND POTATOES

Tahoe Basin Master Gardeners

Trained through the UC Davis Co-operative Extension Service

Science based training

Program designed to assist local gardeners

Food Production and landscape pest issues

Fire wise landscaping

Water conservation landscaping



Workshop topics covered:

1. Project overview
2. Anatomy
3. Planting and care
4. History and culinary aspects
5. Varieties being evaluated
6. Distribution of plant materials



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Project Overview –

- Provide selected varieties of Onions and Potatoes to project participants
- Discuss a bit of the background and history
- Provide information on planting methods and maintenance
- Obtain feedback on the success of your plantings.



Yukon Gold



Texas Yellow
Granex

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Onions

This is the third series of onion trials, but first spring planted

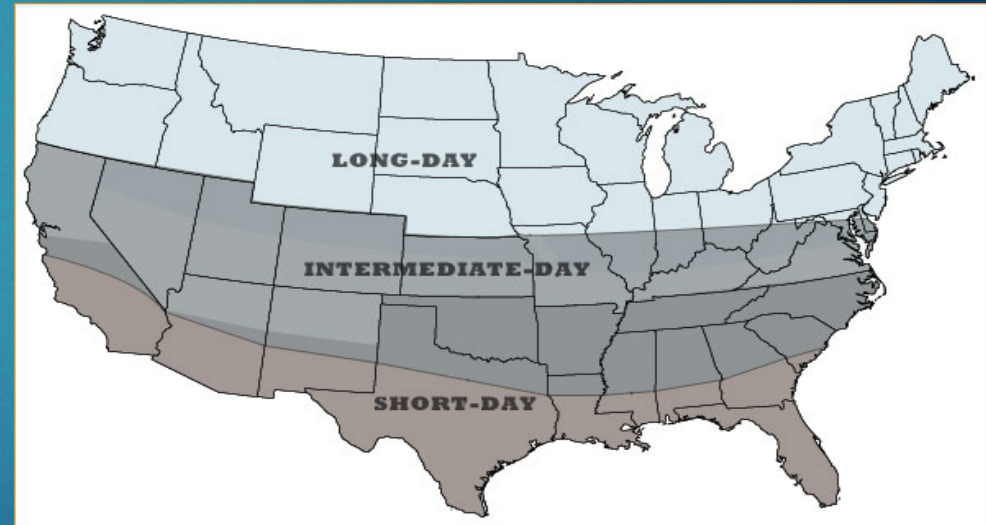
Like many plants onions are affected by length of day

Onions can be categorized based on day length's affect on bulbing



Borettana Cipollini

Tahoe is between the short/long day zones and in the middle of the intermediate zone



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Culinary Alliums

Chives - *Allium schoenoprasum*

Scallions or Green onions - *Allium fistulosum*

Bulb Onions- *Allium cepa*

Shallots - *Allium oschaninii*

Leeks - *Allium ampeloprasum*

Garlic Chives - *Allium tuberosum*

Elephant Garlic - *Allium ampeloprasum*

Softneck Garlic - *Allium sativum* ssp. *sativum*

Hardneck Garlic - *Allium sativum* ssp. *ophioscorodon*

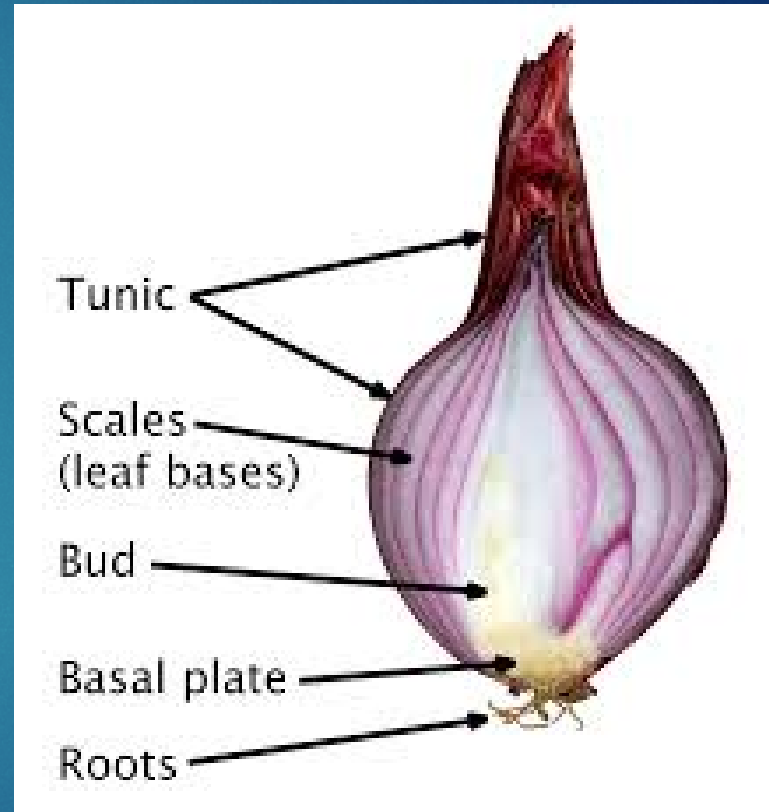
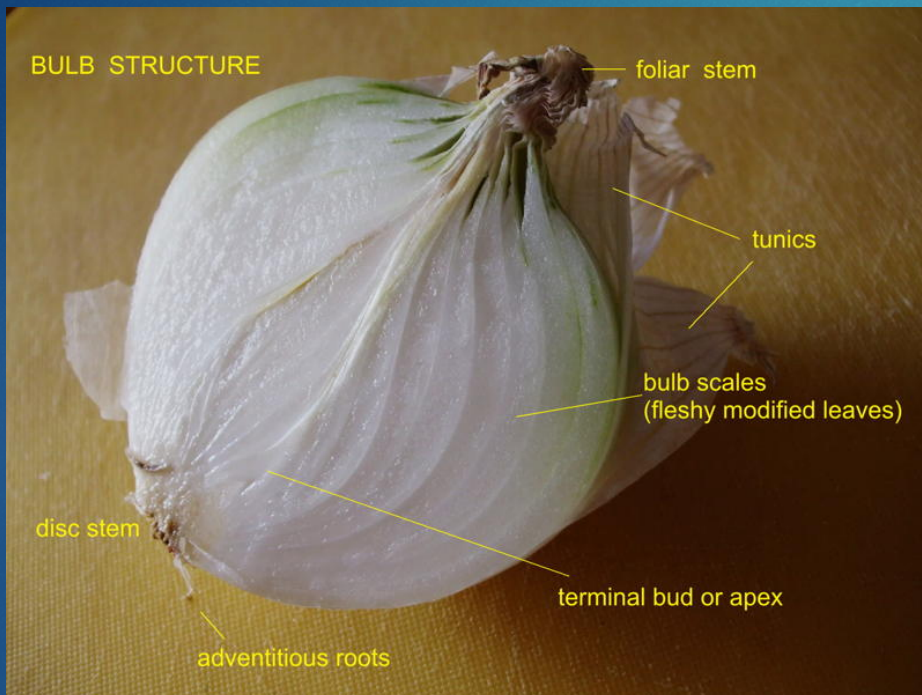


www.heirloomorganics.com

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Anatomy of the Onion



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Garden Preparation - Onions

- Onions do best in raised beds or hilled furrows
- Soil should retain moisture but drain well, having good tilth
- Soil pH of 6.0 - 7.0
- Area free of weeds.
- Consider incorporating a 5-10-5 fertilizer prior to planting
- Direct sunlight based on day length needs
- Onions can be grown in containers – Watch moisture fluctuation



Super Star white onion

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Onion Cultivation

1. Plant 3-6 weeks prior to last frost
2. Plant so that the top of bulbs, 1-2 inches below ground surface
3. Plant 4-6 inches on center.
4. Insure good contact between plant materials and soil.
5. Do not allow soil to dry out.
6. Side dressing of manure, blood meal or nitrogen fertilizers every few weeks.
7. Do not cover emerging bulbs with soil
8. Remove any flower stalks (unless seed production is desired) and harvest.
9. Stop watering when leaves start to yellow, or when bulbing is obvious.
10. When ½ leaves yellow and droop, rake over remaining leaves.
11. After 1 week harvest, dry and store.



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Trial Varieties

Short Day

Texas Yellow Granex

Intermediate Day Varieties

Red Candy Apple

Super Star White Onion

Red Marble Cipollini Onion

Long Day Varieties

Walla Walla Yellow Onion

Ailsa Craig Yellow Onion

Borettana Cipollini



Red Marble Cipollini Onion



Ailsa Craig Onion

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Our Onion Suppliers (and photos)

Dixondale Farms
have been growing
onions in Dimmit
County Texas since
1913.



*Wallace Martin and Bruce Frasier –
Owner Managers of Dixondale Farms*

Dixondalefarms.com

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Why Potatoes

The earliest referenced vegetable grown by pioneers in Tahoe? **Potato**

The first toy every advertised on TV? **Mr. Potato Head!**

One of the first vegetable grown, harvested and eaten in space? **Potato**

Vegetable with the highest total caloric value on a per acre basis? **Potato**

The first freeze dried vegetable? **The Potato**

(Chuño was used as a potato storage method by Andean peoples since before 1000 AD)

The most important non grain/grass crop in the world? **The potato**

The **Potato** is the focus of 2 of the top 11 food museums in the world.

And lastly, what food was the springboard for the industrial revolution?

The potato!



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About Potatoes

Potatoes are a cool weather crop that usually grows well in Tahoe/Truckee

Potatoes are native to South America's Andes Mountains

Cultivation by indigenous peoples goes back perhaps 10,000 years.

A member of the nightshade family, Solanaceae, as are tomatoes and eggplants.

Potato's slow acceptance due in part wide belief in the Doctrine of Signatures

The bottom line being when people are close to starving they are by necessity open to trying new foods

Good nutrition and storage aspects help in acceptance

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Potato History

The European 'discovery' of the potato is first recorded in 1536 by the Conquistadores who found these tubers in the markets throughout the Incan Empire.

The potato started to be used in ship stores and rations, in part due to its storage attributes but was soon found to be highly nutritious. The Canary and Azores Islands, key provisioning stops for Spain's long voyage ships started growing potatoes for islander consumption and for ship stores.

Basque cod fishermen who included potatoes in their ship stores during their long fishing trips to the Grand Banks off of Canada. Many stopped along the coast of Ireland on their return to salt and/or dry their catch, planting potatoes in Ireland for their subsequent use, which was possibly the initial introduction to Ireland, though secondary introductions to Ireland by the English (Raleigh, or Francis Drake working for Raleigh) surely occurred.

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Potato History II

Beyond use as ship's rations the potato languished throughout Europe, used primarily as animal fodder and food of last resort to stave off famine.

In the Americas the potato's range was expanded as a valuable (and cheap) food source for Indian slaves from Chile to Mexico. It has been reported that because of the potato the diet of the slaves was actually better than their overseers who had a distain for the tuber.

Somewhat similarly in Ireland the potato took hold as an inexpensive food for the landless tenet farmers. Throughout Europe the potato was championed by the aristocrats looking for a satisfactory food to feed the masses. Slowly the potato was added as a staple to the diets of much of Europe.

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Potato History III

Equally important was that more food was produced by fewer people allowing the migration of people from farms to urban areas where new industrial jobs were being created. It has been postulated that the potato was the foodstuff that initially powered the Industrial Revolution. And it has been argued that the potato crop failures in the 1830s and 40s accelerated the mechanization of industry as populations decreased or stagnated.

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Potato History IV

English American Colonies (and later the United States) the potato was slow to be embraced, having first been presented to Jamestown Governor Francis Wyatt by Nathaniel Butler, Governor of Bermuda in 1691 from Canary Island sources.

It was not until 1719 when potatoes were grown as a regular food crop by a group of New Hampshire farmers. Thomas Jefferson (and possible Benjamin Franklin) were introduced to the potato while in France. At Jefferson's farm at Monticello red potato and sweet potatoes were grown, primarily by his slaves for their own consumption.

Missionaries in 1836 brought the potato to Idaho in an effort to provide local tribes a consistent and secure food source. The real basis of the commercial potato industry (chips, fries, baked and mashed) can be traced to the Burbank Russet introduced commercially in 1872.

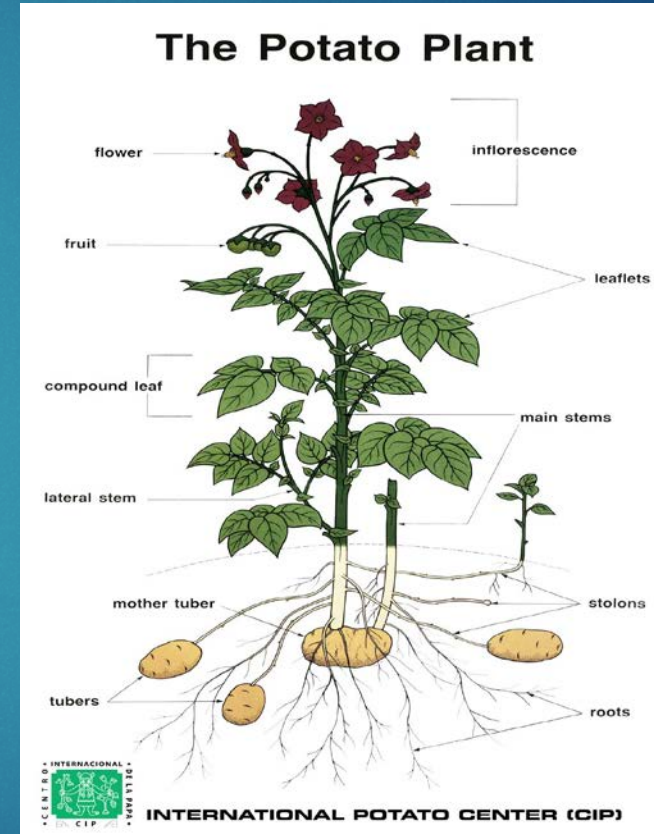
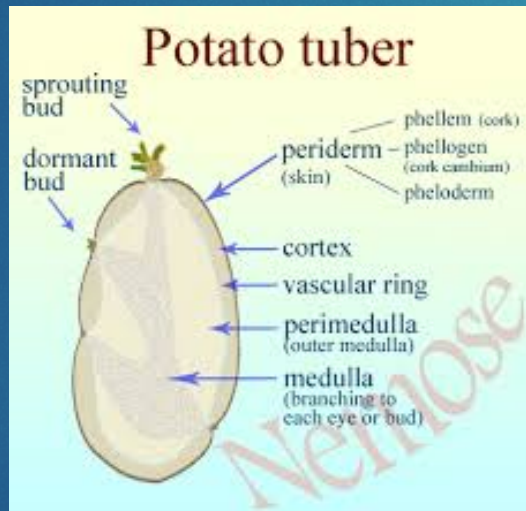
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Potato Anatomy

Potato tubers are modified stems that develop at the terminal ends of stolons

The eyes are actually buds



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Garden Preparation - Potatoes

Decide the method of growing

Hills

Furrows

Raised Beds

Grow Bags

Containers

Straw piles



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Garden Preparation - Potatoes

Soil

Slightly acidic 5.0 – 6.8 (most Tahoe/Truckee native soils)

Well drained soils with good tilth

Should not have grown eggplants or tomatoes previous year

Consider incorporating some potassium and phosphorous fertilizers prior to planting

Avoid manures and composted materials unless well aged and decomposed

Avoid applications of high nitrogen compounds

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Preparing Potatoes for Planting

Use quality seed potatoes

To maximize production it is necessary to prepare potatoes for planting

Consider chitting your potatoes (allow spouts to form before planting)

Chitting may take up to 3 weeks. Cut into sections, wait 24 hours, plant

Consider callusing tuber sections prior to planting

Cut potato into sections that contain at least 2 eyes

Let stand in a dry area for 24-48 hours for the cut end to dry

Plant with eyes towards surface.

For small potatoes plant whole



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Planting Potatoes

Tubers typically form above or at the level of the parent section
For container type plantings keep at least 3 inches soil at
bottom of container

Dig trench 8-12 inches deep plant tuber sections 12 inches apart

Place 3-4 inches of soil on top of planted tuber sections

Fill in trench as plant emerges – never cover plant completely

Hill soil above top of trench 2-4 inches as plan grows

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Potato growing and harvest

Tuber formation begins when the plant is about 10 inches tall

Tuber size is determinant based on variety and environmental conditions

Once full size, the tubers stop growing

New tubers form on a regular basis during the growing season

When plants begin to turn yellow (or after a hard frost) rake over plant tops and stop watering

Harvest after 1-2 weeks. Be careful digging out tubers to avoid injury

Allow spuds to cure on ground for a day, move to dark dry cool place before long term storage

Common issues with growing and harvest:

Scabbing

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Suppliers

The Greenhouse Garden Center Carson City started at its current location in 1974, by the Ruf family. Robert Ruf was a professor of horticulture at the University of Nevada, and his wife an elementary school teacher. After twenty years of running the Garden Center, the Rufs' sold the business to their son David www.greenhousegardencenter.com



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Suppliers

Irish Eyes Garden Seeds, Ellensburg WA www.irisheyesgardenseeds.com is a family owned grower and wholesaler (and on-line sales) of seeds and supplies, established in 1989. With around 20 full time employees farming 150 acres of certified organic seeds and potatoes. Located east of the Cascades in Kittitas the farm contracts with other small growers to be able to provide organic seeds and GMO free seeds and potatoes.



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Co-operative Extension Tahoe Basin Master Gardeners