

## Redbud

### Seed collection:

Eastern redbud fruits are pods. The pods can be collected in fall and winter after the pods turn from green to dark brown.

Seeds are removed by peeling apart the pods around the seeds.

Discard misshapen, off-colored seeds, or seeds with small holes that may indicate the presence of seed weevils.

Seeds can be stored dry for long periods in the refrigerator.

### Seed dormancy:

Redbud seeds have combinational dormancy. This means that they have both physical and physiological dormancy.

### Seed germination:

Scarify seeds to break physical dormancy and allow water uptake.

Stratify seeds using moist chilling for 60 days to satisfy physiological dormancy.

Following stratification, sow seeds in a nursery container to produce a seedling or sow them in a plastic container in the classroom to observe germination.

## Honeylocust

### Seed collection:

Honeylocust fruits are pods. The pods can be collected in fall and into the winter after the pods turn from green to dark brown.

Seeds are removed by breaking and peeling away the outer pod wall around the seeds.

Discard misshapen, off-colored seeds, or seeds with small holes that may indicate the presence of seed weevils.

Seeds can be stored dry for long periods in the refrigerator.

### Seed dormancy:

Honeylocust seeds have physical dormancy.

### Seed germination:

Scarify seeds to break physical dormancy and allow water uptake.

Following scarification, sow seeds in a nursery container to produce a seedling or sow them in a plastic container in the classroom to observe germination.

## Yellowwood

### Seed collection:

Yellowwood fruits are pods. The pods can be collected in summer after the pods turn from green to tan.

Seeds are removed by peeling apart the pods around the seeds.

Discard misshapen or off-colored seeds.

Seeds can be stored dry for long periods in the refrigerator.

Seed dormancy:

Yellowwood has physical dormancy.

Seed germination:

Scarify seeds to break physical dormancy and allow water uptake.

Following scarification, sow seeds in a nursery container to produce a seedling or sow them in a plastic container in the classroom to observe germination.

KY coffeetree

Seed collection:

Kentucky coffeetree fruits are pods. The pods can be collected any time after the pods turn from green to tan, but they will naturally fall from the trees in late winter or early spring.

Seeds are removed by breaking and peeling away the outer pod wall. Inside the pod surrounding the seeds is a sticky or dry jelly-like material. It contains toxic materials that should not be eaten.

Discard misshapen or off-colored seeds.

Seeds can be stored dry for long periods in the refrigerator.

Seed dormancy:

Kentucky coffeetree has physical dormancy.

Seed germination:

Scarify seeds to break physical dormancy and allow water uptake.

Following scarification, sow seeds in a nursery container to produce a seedling or sow them in a plastic container in the classroom to observe germination.

Northern catalpa

Seed collection:

Northern catalpa fruits are long pod-like capsule. They can be collected in fall or winter after they turn brown, but before the capsule opens and releases the seeds.

Seeds are removed by peeling the capsule apart.

Seeds can be stored dry for short periods (1-2 years) in the refrigerator.

Seed dormancy:

Northern catalpa has no dormancy, but some seed lots may require light to germinate.

Seed germination:

Sow seeds in a nursery container and cover lightly to produce a seedling or sow them in a plastic container in the classroom to observe germination.

## Ohio buckeye

### Seed collection:

Ohio buckeye fruits are capsules. They can be collected in late summer after they turn a leathery tan color and begin to split open exposing the three large black seeds.

Seeds are removed by peeling the capsule apart. Seeds resemble edible chestnuts, but Ohio buckeye fruits are not edible and can be toxic.

Seeds of Ohio buckeye should not be allowed to dry out. They can be stored for short periods (1 year) in air tight containers in the refrigerator if not allowed to dry out.

### Seed dormancy:

Ohio buckeye has physiological dormancy.

### Seed germination:

Stratify seeds using moist chilling for 120 days to satisfy physiological dormancy.

Following stratification, sow seeds in a nursery container to produce a seedling or sow them in a plastic container in the classroom to observe germination.

## Black walnut

### Seed collection:

Black walnut fruits are technically drupes. They can be collected in the fall after they fall to the ground.

Seeds are most easily removed from the outer fruit just after they fall to the ground by peeling away the outer layers to get at the hard seed that resembles a nut.

Seeds of black walnut should not be allowed to dry out. They can be stored for short periods (1 year) in air tight containers in the refrigerator if not allowed to dry out.

### Seed dormancy:

Black walnut has physiological dormancy.

### Seed germination:

Stratify seeds using moist chilling for 120 days to satisfy physiological dormancy.

Following stratification, sow seeds in a nursery container to produce a seedling or sow them in a plastic container in the classroom to observe germination.

## Pawpaw

### Seed collection:

Pawpaw fruits are berries. They can be collected in summer after the fruits begin to soften. Pawpaw fruits are edible.

Seeds are large and easily removed after cutting open the fruit.

Seeds of pawpaw should not be allowed to dry out. They can be stored for short periods (1-2 year) in air tight containers in the refrigerator if not allowed to dry out.

Seed dormancy:

Pawpaw has physiological dormancy.

Seed germination:

Stratify seeds using moist chilling for 100-120 days to satisfy physiological dormancy.

Seeds contain a very small embryo that requires time to grow before germination begins.

It can take over a month to see seedlings emerge after sowing.

Following stratification, sow seeds in a nursery container to produce a seedling or sow them in a plastic container in the classroom to observe germination.

Pecan

Seed collection:

Pecan fruits are nuts. They can be collected in fall after the outer covering dries and begins to split open. It may be best to harvest fruits while they are still on the branches in September or soon after they fall to the ground because squirrels will quickly remove seeds. Pecan nuts are edible.

The outer husks should be removed from the seed.

They can be stored dry for 3-5 years in air tight containers in the refrigerator.

Seed dormancy:

Pecan has physiological dormancy, but some seeds may be non-dormant.

Seed germination:

Stratify seeds using moist chilling for 30-60 days to satisfy physiological dormancy and speed germination in any non-dormant seeds.

Following stratification, sow seeds in a nursery container to produce a seedling or sow them in a plastic container in the classroom to observe germination.

Flowering dogwood

Seed collection:

Flowering dogwood fruits are fleshy drupes containing a single seed. They can be collected in fall after the outer covering is red and begins to soften and before the birds take the fruit.

The fruit covering can be rubbed off and remaining fruit washed from the seed. Large amounts of seed can be separated from the fruit using a modified blender method.

They can be stored dry for long periods in air tight containers in the refrigerator.

Seed dormancy:

Flowering dogwood has physiological dormancy.

Seed germination:

Stratify seeds using moist chilling for 120 days to satisfy physiological dormancy.

Following stratification, sow seeds in a nursery container to produce a seedling or sow them in a plastic container in the classroom to observe germination.

## Persimmon

### Seed collection:

Persimmon fruits are berries usually containing 5 to 8 seeds. They can be collected in early fall after the fruit begins to soften. For larger trees, fruits should be collected soon after they fall from the branches and before they are eaten by small animals. The fruit of persimmon is edible.

Seeds can be easily removed from fruit after they are cut open. Any remaining fruit flesh adhering to the seed can be rubbed off in running water. It may be more easily removed if the seeds are soaked in water several days.

They can be stored dry for long periods in air tight containers in the refrigerator.

### Seed dormancy:

Persimmon has physiological dormancy.

### Seed germination:

Stratify seeds using moist chilling for 60-90 days to satisfy physiological dormancy.

Following stratification, sow seeds in a nursery container to produce a seedling or sow them in a plastic container in the classroom to observe germination.

## Sweetgum

### Seed collection:

Sweetgum fruit is an aggregate of small 2-celled capsules that form a spiked ball. Inside each capsule are one or two small winged seeds. Harvest the fruit in the fall after they have turned from green to dark brown and before the beak-like capsules open to release the seeds.

Place the fruit in a shallow pan in a dry place to permit the capsules to open and drop the seeds. This usually takes 5-7 days. The capsules also contain a granular substance that helps seed dispersal and should not be confused with the larger brown winged seed.

They can be stored dry for long periods in air tight containers in the refrigerator.

### Seed dormancy:

Sweetgum has physiological dormancy.

### Seed germination:

Stratify seeds using moist chilling for 30-60 days to satisfy physiological dormancy.

Following stratification, sow seeds in a nursery container to produce a seedling or sow them in a plastic container in the classroom to observe germination.

## Tulip poplar

### Seed collection:

Tulip poplar fruit is a cone-shaped aggregate of winged seeds (samaras). Harvest the fruit in the fall after they have turned a light tan and before the seeds separate for dispersal. Allow fruits to dry for several days and the seeds will easily separate from the fruit by pulling them apart.

They can be stored dry for long periods in air tight containers in the refrigerator.

### Seed dormancy:

Tulip poplar has physiological dormancy.

### Seed germination:

Stratify seeds using moist chilling for 60-90 days to satisfy physiological dormancy.

Following stratification, sow seeds in a nursery container to produce a seedling or sow them in a plastic container in the classroom to observe germination.

## Big leaf magnolia

### Seed collection:

Big leaf magnolia fruit is an aggregate of capsule-like structures. Each can contain a single fleshy seed. Harvest the fruit in the fall after the seeds have swollen and are bright red. Later in the season, the fleshy seeds can be found around the base of the tree after they have fallen from the fruit.

The fleshy seed covering should be removed by rubbing it off under running water.

They can be stored dry for several years in air tight containers in the refrigerator.

### Seed dormancy:

Big leaf magnolia has morphophysiological dormancy.

### Seed germination:

Stratify seeds using moist chilling for 100-120 days to satisfy physiological dormancy.

The embryo within the seed is very small and must grow within the seed prior to germination. Therefore, seedling emergence may take over one month.

Following stratification, sow seeds in a nursery container to produce a seedling or sow them in a plastic container in the classroom to observe germination.

## Black cherry

### Seed collection:

Black cherry fruit is a fleshy drupe containing a single seed. Harvest the fruit in the late summer after they change from reddish-brown to black.

The fruit covering can be rubbed off under running water. Large amounts of seed can be separated from the fruit using a modified blender method.

They can be stored dry for long periods in air tight containers in the refrigerator.

Seed dormancy:

Black cherry has physiological dormancy.

Seed germination:

Stratify seeds using moist chilling for 120 days to satisfy physiological dormancy.

Following stratification, sow seeds in a nursery container to produce a seedling or sow them in a plastic container in the classroom to observe germination.

Bald cypress

Seed collection:

Bald cypress fruit is a round cone. Harvest the fruit in fall before they open.

The fruit should be allowed to dry and then broken apart. The seeds are difficult to completely separate from the resinous fruit part and they can be sown together. Try to avoid getting the sticky resin on yourself, your clothes, or work space because it is very difficult to get off.

They can be stored dry for long periods in air tight containers in the refrigerator.

Seed dormancy:

Bald cypress has physiological dormancy.

Seed germination:

Stratify seeds using moist chilling for 60 days to satisfy physiological dormancy.

Following stratification, sow seeds in a nursery container to produce a seedling or sow them in a plastic container in the classroom to observe germination.

Eastern hemlock

Seed collection:

Eastern white pine fruit is a large elongated cone. Harvest the fruit in the fall as the scales in the cone begin to open, but before the small winged seeds have been shed.

The fruit can be allowed to dry, where it will open the scales and shed the seeds. For small quantity of seeds, the cone scales can be pulled apart to retrieve the seeds.

They can be stored dry for long periods in air tight containers in the refrigerator.

Seed dormancy:

Eastern white pine has physiological dormancy.

Seed germination:

Stratify seeds using moist chilling for 60 days to satisfy physiological dormancy.

Following stratification, sow seeds in a nursery container to produce a seedling or sow them in a plastic container in the classroom to observe germination.

#### White ash

##### Seed collection:

White ash fruit is a samara. They appear as clusters of fruit near the ends of the branches. Harvest the fruit in the fall into winter after the fruit turns from green to tan. The wing of the samara does not need to be removed from the seed before sowing.

They can be stored dry for long periods in air tight containers in the refrigerator.

##### Seed dormancy:

White ash has morphophysiological dormancy.

##### Seed germination:

Seeds must be warm (~75F) stratified for 30 days to allow the small embryo to grow inside the seed. This is followed by moist chilling stratification for 60 days to satisfy physiological dormancy.

Following stratification, sow seeds in a nursery container to produce a seedling or sow them in a plastic container in the classroom to observe germination.

#### Green ash

##### Seed collection:

Green ash fruit is a samara. They appear as clusters of fruit near the ends of the branches. Harvest the fruit in the fall into winter after the fruit turns from green to tan. The wing of the samara does not need to be removed from the seed before sowing.

They can be stored dry for long periods in air tight containers in the refrigerator.

##### Seed dormancy:

Green ash has morphophysiological dormancy.

##### Seed germination:

Seeds must be warm (~75F) stratified for 30 days to allow the small embryo to grow inside the seed. This is followed by moist chilling stratification for 60 days to satisfy physiological dormancy. In some cases, scarification prior to warm stratification

Following stratification, sow seeds in a nursery container to produce a seedling or sow them in a plastic container in the classroom to observe germination.

#### Blue ash

##### Seed collection:



Blue ash fruit is a samara. They appear as clusters of fruit near the ends of the branches. Harvest the fruit in the fall into winter after the fruit turns from green to dark brown. The wing of the samara does not need to be removed from the seed before sowing. They can be stored dry for long periods in air tight containers in the refrigerator.

Seed dormancy:

Blue ash has morphophysiological dormancy.

Seed germination:

Seeds must be warm (~75F) stratified for 30 days to allow the small embryo to grow inside the seed. This is followed by moist chilling stratification for 60 days to satisfy physiological dormancy.

Following stratification, sow seeds in a nursery container to produce a seedling or sow them in a plastic container in the classroom to observe germination.

Red oak

Seed collection:

Red oak fruit is a nut commonly called an acorn. They form along the branches. Harvest the fruit in the fall after the acorn becomes brown or tan. Seeds can be collected after they fall to the ground. The cup is usually removed from the acorn prior to storage or germination.

It is common to find weevils in acorns and they can destroy the ability of the seed to germinate. You can determine if the acorns have weevils by placing them in water.

Acorns that float usually contain weevil damage and should be discarded. Only save the acorns that sink.

They can be stored for short periods (~ 1 year) in air tight containers in the refrigerator if the seeds are not permitted to dry out.

Seed dormancy:

Red oak has physiological dormancy.

Seed germination:

Stratify seeds using moist chilling for 60 days to satisfy physiological dormancy.

Following stratification, sow seeds in a nursery container to produce a seedling or sow them in a plastic container in the classroom to observe germination.

Shingle oak

Seed collection:

Shingle oak fruit is a nut commonly called an acorn. They form along the branches.

Harvest the fruit in the fall after the acorn becomes brown or tan. Seeds can be collected after they fall to the ground. The cup is usually removed from the acorn prior to storage or germination.

It is common to find weevils in acorns and they can destroy the ability of the seed to germinate. You can determine if the acorns have weevils by placing them in water. Acorns that float usually contain weevil damage and should be discarded. Only save the acorns that sink.

They can be stored for short periods (~ 1 year) in air tight containers in the refrigerator if the seeds are not permitted to dry out.

Seed dormancy:

Shingle oak has physiological dormancy.

Seed germination:

Stratify seeds using moist chilling for 60 days to satisfy physiological dormancy.

Following stratification, sow seeds in a nursery container to produce a seedling or sow them in a plastic container in the classroom to observe germination.

Pin oak

Seed collection:

Pin oak fruit is a nut commonly called an acorn. They form along the branches. Harvest the fruit in the fall after the acorn becomes brown or tan. Seeds can be collected after they fall to the ground. The cup is usually removed from the acorn prior to storage or germination.

It is common to find weevils in acorns and they can destroy the ability of the seed to germinate. You can determine if the acorns have weevils by placing them in water.

Acorns that float usually contain weevil damage and should be discarded. Only save the acorns that sink.

They can be stored for short periods (~ 1 year) in air tight containers in the refrigerator if the seeds are not permitted to dry out.

Seed dormancy:

Pin oak has physiological dormancy.

Seed germination:

Stratify seeds using moist chilling for 60 days to satisfy physiological dormancy.

Following stratification, sow seeds in a nursery container to produce a seedling or sow them in a plastic container in the classroom to observe germination.

Bur oak

Seed collection:

Bur oak fruit is a nut commonly called an acorn. They form along the branches. Harvest the fruit in the fall after the acorn becomes brown or tan. Seeds can be collected after they fall to the ground. The cup is usually removed from the acorn prior to storage or germination.

It is common to find weevils in acorns and they can destroy the ability of the seed to germinate. You can determine if the acorns have weevils by placing them in water. Acorns that float usually contain weevil damage and should be discarded. Only save the acorns that sink.

They can be stored for short periods (~ 1 year) in air tight containers in the refrigerator if the seeds are not permitted to dry out.

Seed dormancy:

Bur oak may be non-dormant or have physiological dormancy depending on the seed source.

Seed germination:

Sow seeds immediately after harvest. If they do not germinate within two weeks, stratify seeds using moist chilling for 30 days to satisfy physiological dormancy.

Following stratification, sow seeds in a nursery container to produce a seedling or sow them in a plastic container in the classroom to observe germination.

Red maple

Seed collection:

Red maple fruit is a samara. Harvest them spring (May to June) after they turn from green to tan. Fruits can also be collected after they naturally fall from the trees.

Red maple seeds can be stored in the refrigerator for a few weeks if they are not allowed to dry out.

Seed dormancy:

Red maple has no dormancy.

Seed germination:

Sow seeds soon after harvest in a nursery container to produce a seedling or sow them in a plastic container in the classroom to observe germination.

Sugar maple

Seed collection:

Sugar maple fruit is a samara. Fruits can be collected in fall (September to November) after they turn from green to brown or after they fall to the ground.

They can be stored dry for several years in air tight containers in the refrigerator.

Seed dormancy:

Sugar maple has physiological dormancy.

#### Seed germination:

Remove the winged portion of the fruit and stratify seeds using moist chilling for 60 days to satisfy physiological dormancy.

Following stratification, sow seeds in a nursery container to produce a seedling or sow them in a plastic container in the classroom to observe germination.

#### Cockspur hawthorn

##### Seed collection:

Cockspur hawthorn fruit is a small pome-like drupe that contains two to four white nutlets (seeds). Although it resembles a pome (fruit type in apples), the hawthorn fruit is classified a drupe because each seed is enclosed by a hard fruit covering (endocarp) rather than only a seed coat. Fruits can be collected in fall after they turn red. Fruits ripen about September but persist into the winter.

Split the fruit open and remove the small white seeds. They can be stored dry for several years in air tight containers in the refrigerator.

##### Seed dormancy:

Cockspur hawthorn seeds show combinational dormancy. They have physical and morphophysiological dormancy. Seeds must first be scarified to permit imbibition. Then they should be warm (~75F) stratified for 100 days to allow the small embryo to grow inside the seed. This is followed by moist chilling stratification for 100 days to satisfy physiological dormancy.

##### Seed germination:

Following stratification, sow seeds in a nursery container to produce a seedling or sow them in a plastic container in the classroom to observe germination.

#### Serviceberry

##### Seed collection:

Serviceberry fruit is a small pome that contains several seeds. Fruits can be collected in June (one common name for this plant is Juneberry) after they turn red and before they are eaten by birds.

Split the fruit open and remove the small white seeds. They can be stored dry for several years in air tight containers in the refrigerator.

##### Seed dormancy:

Serviceberry seeds show physiological dormancy. Stratify seeds for 100 to 120 days

#### Seed germination:

Following stratification, sow seeds in a nursery container to produce a seedling or sow them in a plastic container in the classroom to observe germination.

#### River birch

##### Seed collection:

River birch fruit are small nutlets held together in a catkin-like aggregate of fruits called strobiles. Fruits can be collected in the spring in May to June just as they turn from green to brown. The fruits will separate from the catkin-like aggregate and be spread by wind. Collect seed before it is released and scattered.

They can be stored dry for several years in air tight containers in the refrigerator.

##### Seed dormancy:

River birch seeds are non-dormant if germinated under long days (light for >16 hours). In order to germinate in the dark, seeds need to be stratified for 60 days

##### Seed germination:

Sow seeds on the surface of the substrate in a nursery container to produce a seedling or sow them in a plastic container in the classroom under long day light conditions to observe germination.

#### White oak

##### Seed collection:

White oak fruit is a nut commonly called an acorn. They form along the branches. Harvest the fruit in the fall after the acorn becomes brown or tan. Seeds can be collected after they fall to the ground. The cup is usually removed from the acorn prior to storage or germination.

It is common to find weevils in acorns and they can destroy the ability of the seed to germinate. You can determine if the acorns have weevils by placing them in water.

Acorns that float usually contain weevil damage and should be discarded. Only save the acorns that sink.

They can be stored for short periods (~ 1 year) in air tight containers in the refrigerator if the seeds are not permitted to dry out.

##### Seed dormancy:

White oak seeds are non-dormant and will germinate immediately after sowing.

##### Seed germination:

Sow seeds immediately after harvest. Sow seeds in a nursery container to produce a seedling or sow them in a plastic container in the classroom to observe germination.

