Guide to Properly Planting a New Container Grown Plant

I. Site selection – like LSU Agcenter says “Right Plant, Right Place” – for more info about growing conditions see your new plant’s product page on our website. You can also look for the “More information from universities, horticulturists, etc...” link below the order button on that page as well for additional information from extension resources when it’s available.

A. Sunlight
   1. Hours per day
   2. Intensity - time of day it receives sunlight
      a) Many more shade loving plants tolerate morning sunlight than midday and afternoon sun

B. Soil
   1. Soil tests are cheap compared to the time and effort lost, possible plant loss and disappointment, as well as the fertilizer and money wasted due to guesswork. Contact your local county extension agent to get assistance and guidance if you need help.
   2. Structure (drainage, compaction, etc...)
   3. pH
   4. Organic matter content (moisture & nutrient holding ability)
   5. Fertility & other minerals

C. Mature Size of the Plant

D. Climate & Microclimates
   1. Temperature
      a) Cold hardiness, heat tolerance, chill hour requirements
      b) Click here to find your USDA cold hardiness zone
   2. Air circulation
   3. Moisture

E. Other
II. Actual Planting in average to well-drained soils

A. Dig a hole twice as wide as the container but no deeper than the root ball.
   1. Stop digging if you hit a poorly draining clay hardpan or have poorly drained soils and plants that are sensitive to it and go to step IV.
   2. Use your shovel or spade to break up any clumps into a loose friable soil that it is easy to stick your fingers into and thus it should be easy for roots to grow into.

B. Check your depth
   1. Your goal is for the top of the existing root ball to end up even with the top of the surrounding ground level.
   2. Flatten and firm the bottom of the hole to match the bottom of the root ball.
   3. Set the plant, while it is still in its container, into the hole and check the depth. Add or remove soil as needed. See diagram at right.

C. Add amendments as needed to the excavated soil
   1. For Camellias, Azaleas, Hydrangeas, and other plants that prefer a humus rich soil it is often a good idea to mix a good quality potting soil or peat moss to the soil to help them get established.
   2. You can also work in a slow release, non-burning fertilizer at this time if desired.

D. Carefully remove the root ball from the container
   1. Your goal here is to not disturb nor shatter the root ball during this process, if possible, nor pull on the stem of the plant.
   2. With small plants you can often simply gently squeeze the sides of the container and then turn the plant upside down while letting gravity ease the root ball out of the container. You must be prepared to catch the full weight of the plant and root ball with your open fingers. For larger plants it is often easier to lay them on their side, and even then it is best not to pull on or squeeze the stems.
   3. Place the root ball in the center of the hole and check your soil depth again to make sure that the level is correct. Adjust as necessary. For larger plants and trees you may want to step back to make sure that the plant is straight. You can adjust the soil beneath the plant if necessary just remember that the bottom of the root ball should have good contact with the bottom of the hole across its entirety.
   4. Even if you set the plant perfectly in the hole the first time, it is still a good idea to carefully turn the plant 1/8 to ¼ of a turn back then forward to ensure there is good contact between the root ball and the soil.

E. Backfill the hole with the excavated soil or amended soil
1. Fill the space around the root ball with the loose soil, lightly firming it in place with open fingers as you go.
2. Your goal here is to remove the largest air spaces while retaining a friable soil. There is no need to “pack the soil” if you water your plants in properly.
3. Fill the hole with firmed soil until it is even with or just slightly above the level of the surface of the new plant’s root ball.
4. Place any “extra” soil into an empty container for later use.

**F. Watering – 3 times**
1. Thorough watering ensures that the root ball has good contact with the surrounding soil (i.e. it never knows it’s been transplanted) and it removes any large air pockets that we may have missed during planting.
2. Water thoroughly and well past the point of runoff using a water breaker attached to a water hose or watering can. Don’t wash the soil away from the root ball during this process or you will have to replace it. Once the water begins to run off allow that to soak in. You should see bubbles coming up from around the root ball during this process if you are doing it properly.
3. Allow the water to thoroughly soak in and check your soil level and add more if necessary.
4. Water thoroughly again. Allow it to soak in. Check the soil level and adjust if needed.
5. Water thoroughly one last time. Check the soil level and adjust if needed.
6. If you adjusted the soil in step 5 repeat step 5.

**III. Actual planting in poorly drained soils.**

**A. Dig a hole twice as wide as the container but no deeper than the root ball.**
1. Stop digging if you hit a poorly draining clay and plan to build a mound of soil up to the edges of the root ball. Digging into a heavy clay soil may create a bowl-shaped low area under the plant where water can stand which may lead to root rot and other disease problems.
2. Use your shovel or spade to break up any clumps into a loose friable soil that it is easy to stick your fingers into thus it should be easy for roots to grow into.

**B. Check your depth**
1. Your goal is for the top of the existing root ball to end up at least 2-4-6” above the top of the surrounding natural ground level.
   a) For small plants you can simply build a mound to start with.
2. Flatten and firm the bottom of the hole to match the bottom of the root ball.
3. Set the plant, pot and all, into the hole and check depth. Add or remove soil as needed. See diagram at right.
C. Add amendments as needed to the excavated soil
   1. For Camellias, Azaleas, Hydrangeas, and other plants that prefer a humus rich soil it is often a good idea to mix a good quality potting soil or peat moss into the soil to help them get established. Some plants will not tolerate standing water for extended periods of time and where these conditions occur should be planted in raised beds or containers.
   2. You can also work in a slow release, non-burning fertilizer at this time if desired.

D. Carefully remove the root ball from the container
   1. Your goal here is to not disturb nor shatter the root ball during this process if possible.
   2. With small plants you can often simply gently squeeze the sides of the container and then turn the plant upside down while easing the root ball out of the container. You must be prepared to catch the full weight of the plant and root ball.
   3. Place the root ball in the center of the hole and check your soil depth again to make sure that your level is correct. Adjust as necessary. For larger plants and trees you may want to step back to make sure that the plant is straight. You can adjust the soil beneath the plant if necessary just remember that the bottom of the root ball should have good contact with the bottom of the hole across its entirety.

E. Backfill the hole with the excavated soil or amended soil
   1. Fill the space around the root ball with the loose soil, lightly firming it in place with open fingers as you go.
   2. Your goal here is to remove the largest air spaces while retaining a friable soil. There is no need to “pack the soil” if you water your plants in properly.
   3. Fill the hole with firmed soil and mound it up until it is even with or just slightly above the level of the surface of the new plant’s root ball. It should look similar to the diagram above.

F. Initial Watering = 3 times
   1. Thorough watering ensures that the root ball has good contact with the surrounding soil (i.e. it never knows it’s been transplanted) and it removes any large air pockets that we may have missed during planting.
   2. Water thoroughly and well past the point of runoff using a water breaker attached to a water hose or watering can. Take your time so that you don’t wash the soil away from the root ball during this process or you will have to replace it. Once the water begins to run off allow that to soak in. You should see bubbles coming up from around the root ball during this process if you are doing it properly.
   3. Allow the water to thoroughly soak in and check your soil level and add more if necessary.
   4. Water thoroughly again. Allow it to soak in. Check the soil level and adjust if needed.
   5. Water thoroughly one last time. Check the soil level and adjust if needed.
   6. If you adjusted the soil in step 5 repeat step 5.
IV. Mulch

A. Apply an organic mulch at the appropriate depth (2-4” depending on the plant and mulch you choose)

1. Organic mulches provide many benefits including but not limited to:
   
   a) **Moisture retention & evaporation reduction**
   
   b) **Weed prevention**
      
      (1) Less chance of mower & weed whacker damage
      
      (2) Lower maintenance
      
      (3) Weeds that do come up are often easier to pull
   
   c) **Looks nice**
   
   d) **Recycles fall leaves**
   
   e) **Acts as an insulator – warmer in winter, cooler in summer, plus less daily fluctuation**
   
   f) **Reduces soil erosion, compaction, and aids in water penetration**
   
   g) **Broken down into useful nutrients by soil macro & microorganisms**

      (1) The actions of these organisms (imagine a minute earthworm crawling through the soil creating tiny passages) alter the structure of the soil into an easily penetrable, root friendly soil that is readily colonized by beneficial mycorrhizae and a variety of other beneficial organisms.

      (i.e. a juicy, root smacking soil ecosystem designed for healthy and vigorous root and top growth as well as flower and fruit production)

Thank You & Good Growing,
Jeff McMillian

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