



# **Orange County Fertilizer Application Education Course for Citizens**



# **Welcome!**

**Thanks for taking the time to  
learn how to keep Central  
Florida beautiful while  
protecting our water quality!**



# Why is Orange County Requiring this Training?

Many fertilizers contain nitrogen and phosphorus, and excess nitrogen and phosphorus are known to cause algae blooms, fish kills, and other water quality problems.

Anyone applying fertilizer in Orange County should understand how to prevent pollution from the nutrients they spread on their landscape.

Orange County has regulated fertilizer application since 2009 to help protect our lakes, rivers, springs and groundwater. (Ordinance was updated in 2017.)



**Only individuals that complete this online educational course may apply fertilizers during the rainy season restriction period.**



# What Does the Ordinance Require?

We would love for you to read the [whole ordinance](#)! But if not, here are some key factors that are included in the regulation:

- Stores that sell fertilizer must display information about our ordinance
- Never use fertilizer containing phosphorus (unless a soil test proves it is needed)
- Never use fertilizer containing nitrogen in summer months (trained people are exempt)
- If you choose to apply fertilizer with nitrogen, make sure 65% is slow-release nitrogen type
- Keep fertilizer more than 15 feet away from wetlands and water bodies
- Use a broadcast fertilizer spreader that has a deflector shield
- Clean up fertilizer that spills or could end up on sidewalks, driveways, or streets
- Keep your grass clippings and yard debris out of roads, gutters, and storm drains
- Ensure your landscape contractor complies with the fertilizer ordinance, too!



# What Should I Learn Here?

**When you finish this course, you will know how making good fertilizer decisions helps to protect our water quality, and you will be able to answer the following key questions:**

- Do I need to fertilize my landscape?
- How do I read a fertilizer label?
- How much fertilizer should I apply?
- How do I choose, calibrate and use a fertilizer spreader?
- What is a fertilizer free zone?
- Am I responsible for compliance by my lawn care professional?



# Course Goals

- **Do I need to fertilize my landscape?**
  - How do I read a fertilizer label?
  - How much fertilizer should I apply?
  - How do I choose, calibrate and use a fertilizer spreader?
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# Do I Need to Fertilize My Landscape?

You might need to fertilize, or you might not. Use a soil test to help you understand what nutrients are present in your soil.

Please be careful with fertilizer! Too much can result in the following negative impacts:

- Weak plants that are susceptible to disease and pests
- Wasted money
- Harm to the environment via pollution runoff and leaching through soils

***Florida soils usually have plenty of phosphorus and rarely need more.***



# Do I Need to Fertilize My Landscape?



Excess nutrients in the form of nitrogen and phosphorus can harm waterways miles from your home.

Traveling with stormwater and leaching through soil into the aquifer, excess nitrogen and phosphorus can cause algae blooms and reduced visibility, and even cause fish kills.

**Here's some good news!:** You can buy fertilizer that contains zero nitrogen or phosphorus. Look for products that contain minerals such as iron and magnesium, or are labeled as containing, "micronutrients."



# Soil Tests in Orange County

Contact the Orange County Agricultural Extension Service (also known as IFAS) for information about having your soil tested: 407-254-9200

(In Orange County, you must always get a soil test before applying fertilizer that contains phosphorus – all year long, not just during the rainy season)



# Course Goals

- Do I need to fertilize my landscape?
- **How do I read a fertilizer label?**
- How much fertilizer should I apply?
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# Why Is Reading Label Details So Important?

The Orange County Fertilizer Management Ordinance expects you to know the following things before you apply fertilizer:

- The amount of slow-release nitrogen (N) in your fertilizer (must be at least 65%)
- The total pounds of N in the bag of fertilizer you intend to use
- The size of the area you need to fertilize
- The size of the area your bag of fertilizer should cover
- Whether the label application rates or County requirements result in your applying the least amount of N—always choose the one that applies less N\*

\*NEVER apply more than 1 pound of N per 1,000 square feet (SF), and if your label recommends less than 1 pound per 1,000 SF, follow the label

# When shopping, please use the following helpful information on the fertilizer bag:

- Where to use the fertilizer (turf, trees, plants?)
- Percentage of Nitrogen, Phosphorus, and Potassium
- How much of the nitrogen is "slow-release" type
- How much to apply
- How much area your bag of fertilizer will cover
- Which number to choose on your spreader dial



All fertilizer bag labels look different, but the information you need is there!

# How Do I Read a Fertilizer Label?

The three numbers on a label tell you what percentage of nitrogen, phosphorus and potassium are in the bag:

- 1) The first number is always percent nitrogen (N)
- 2) The middle number is % phosphorus (P) (*and in Orange County must always be ZERO\**)
- 3) The third number is % potassium (K)

16-0-8



\* If you have a soil test showing a deficiency, you may apply phosphorus in Orange County.

IFAS will help you arrange testing: (407) 254-9200

# Calculating if Nitrogen is 65% SRN

1. Divide the % of slow-release nitrogen by the % total nitrogen.
2. Multiply by 100
3. If the answer is less than 65, it does not comply with our ordinance.

$$\frac{\text{Slow-Release N \%}}{\text{Nitrogen N \%}} \times 100 = 65\%$$

## What To Look for On Your Fertilizer Label

% of Total N as Slow-Release Nitrogen (SRN)=

$$\frac{9.1}{14} \times 100 = 65\%$$

(Meets 65% SRN Orange County Requirement)



### GUARANTEED ANALYSIS

TOTAL NITROGEN (N).....	14.00 %
14.45% Urea Nitrogen (N)*	
SOLUBLE POTASH (K <sub>2</sub> O).....	26.00 %
SULFUR (S) Total.....	19.70 %
10.50% Free Sulfur (S)	
9.20% Combined Sulfur (S)	
IRON (Fe) Total.....	0.96 %
0.19% Water Soluble Iron (Fe)	
MANGANESE (Mn) Total.....	0.48 %
0.1% Water Soluble Manganese (Mn)	
DERIVED FROM: Polymer Coated Sulfur, Coated Urea, Sulfate of Potash, Iron Oxide, Manganese Oxide.	
CHLORINE (Cl) Max.....	2.00 %
*9.10% Slowly Available Urea Nitrogen from Polymer Coated Sulfur Coated Urea.	

# Does My Fertilizer Have 65% SRN?

1. Divide the % of slow-release nitrogen by the % total nitrogen.
2. Multiply by 100
3. If the answer is less than 65, it does not comply with our ordinance.

Now YOU try it!

Your fertilizer has 20% total N and 8% is slow-release type.

Does it comply with our ordinance?

*(Answer is on the next slide)*

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$$\frac{\text{Slow-Release N \%}}{\text{Nitrogen N \%}} \times 100 = ? \%$$

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# Does it comply with our ordinance?

1. Divide the % of slow-release nitrogen by the % total nitrogen.
2. Multiply by 100
3. If the answer is less than 65, it does not comply with our ordinance.

$$\frac{\text{Slow-Release N \%}}{\text{Nitrogen N \%}} \times 100 = ? \%$$

Your fertilizer has 20% total N and 8% is slow-release type N.

$$\frac{8 \%}{20\%} \times 100 = 40\% \text{ No}$$

40% SRN is not allowed for use in Orange County



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# How Much Fertilizer Should I Apply?



Before you buy fertilizer, you must know these two things:

1. The size of your yard

Keep this info handy once you calculate it!

2. How to calculate the amount of nitrogen being applied

*No more than 1 pound of nitrogen (**N**) per 1000 SF is allowed*

# How Big is My Yard?

## Step 1: Measure Length & Width:

Either pace off (or measure) the length of the area you want to fertilize, then do the same for the width. (Tip: 1 pace ~ 3 feet)

## Step 2: Calculate the area:

Length X Width = Area (square feet to fertilize)

(Area of triangular spaces:  $\frac{1}{2}$  base X height)

## Step 3: Call EPD if you have questions or need help: 407-836-1400



Tip: *If your yard isn't square, you might need to measure several areas and add the values together*

# How Much Fertilizer Should I Apply?

Let's review a few items the Orange County Fertilizer Management Ordinance expects you to know before you apply fertilizer:

- The amount of slow-release nitrogen (N) is in your fertilizer (must be at least 65%)
- The total pounds of N in the bag of fertilizer you intend to use
- The size of the area you need to fertilize
- The size of the area your bag of fertilizer should cover
- Whether the label application rates or County requirements result in your applying the least amount of N—always choose the one that applies less N\*

\*NEVER apply more than 1 pound of N per 1,000 square feet (SF), and if your label recommends less than 1 pound per 1,000 SF, follow the label

# Calculating How Much You Can Legally Apply

## Example:

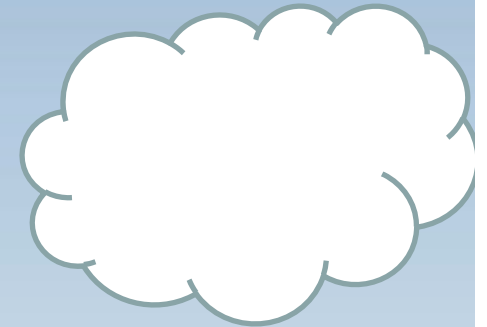
A 50 lb bag labeled **16-0-8** has 8 lbs of Nitrogen  
( $50 \times 0.16 = 8$ ).

*8 pounds of nitrogen can cover up to 8,000 SF of  
landscape (1 lb N / 1,000 SF landscape)*

**SO. . .** If your yard is only 5,000 SF, you must  
calculate how many pounds of 16-0-8 you can  
legally apply in Orange County:

$$(5,000 \text{ SF} \times 50 \text{ lbs}) \div 8,000 \text{ SF} = \underline{31.25 \text{ pounds}}$$

*31.25 pounds is the maximum amount of this particular  
fertilizer you may apply to a 5,000 SF area to keep the  
nitrogen content below the regulated limit*



# Calculating How Much to Use

## IMPORTANT!

Orange County allows up to 1 pound of nitrogen (N) to be applied on every 1,000 square feet of landscape, but prefers people use as little as possible.

If your fertilizer bag says to apply less N than the amount you calculated, FOLLOW THE LABEL INSTRUCTIONS so you apply less nitrogen.

Applying LESS nitrogen is always better for our water quality.



**Established Lawns:** Apply the contents of this bag to 11,000 square feet. Applications should be made with rates recommended in the document titled Best Management Practices for Protection of Water Resources in Florida, June 2002, Florida Green Industries. Copies may be obtained from [http://www.dep.state.fl.us/water/nonpoint/docs/nonpoint/BMP\\_Book.com](http://www.dep.state.fl.us/water/nonpoint/docs/nonpoint/BMP_Book.com) Make no more than 2 applications per year.

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# Correctly Choose, Calibrate and Use a Fertilizer Spreader

There are three main types of mechanical fertilizer spreaders:

- Handheld
- Broadcast type\*
- Drop type

**Handheld Spreader**



**Drop Spreader**



**Broadcast Spreader**



**Deflector  
Shield**

\* If you choose a broadcast spreader, it **MUST** have a deflector shield to comply with Orange County's ordinance





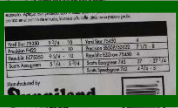
# Correctly Choose, Calibrate and Use a Fertilizer Spreader



- Each spreader will have a dial or lever that sets the spreader's application rate
- Read the fertilizer bag to determine which number to set on the spreader

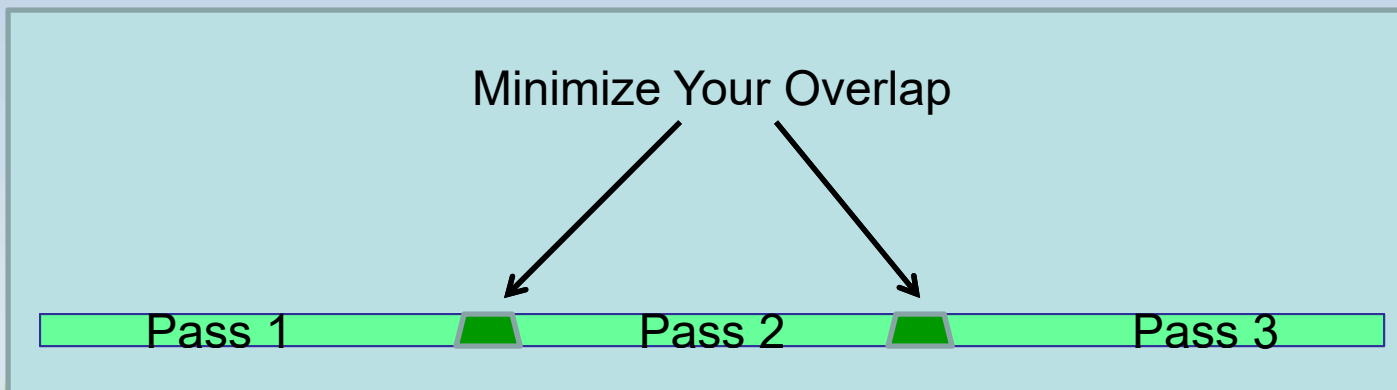


Yard Star 75350	9 3/4 - 10	Yard Star 75450	4
Precision FH22	9 - 10	Precision SB50P/50K22	7 1/2 - 8
Republic EZ75350	9 3/4 - 10	Republic EZGrow 75450	4
Scotts Accugreen	5 1/4 - 5 3/4	Scotts Easygreen 745	27 - 27 1/4
		Scotts Speedygreen 740	4 3/4 - 5



# Correctly Choose, Calibrate and Use a Fertilizer Spreader

- Know the spread pattern of your spreader
- Follow spreader operation instructions to stop applying fertilizer during turns
- Each pass should barely overlap the previous pass:



# Course Goals

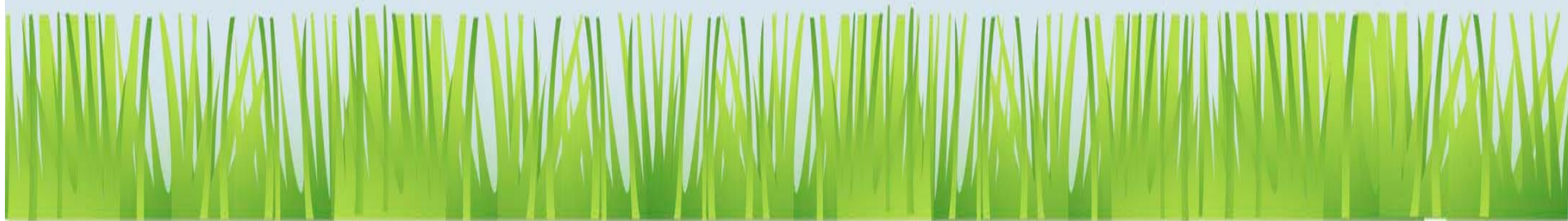
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# What is a Fertilizer-free Zone?

A fertilizer-free zone is any place where you should not apply fertilizer. This includes the following:

- 15 feet from any water body or wetland
- Hard surfaces (such as pavement, concrete, paving stones, etc.)
- Storm drains and ditches



# Fertilizer-free Zones Near Water or Wetlands



Fertilizer **MAY NOT** be applied within 15 Feet of any lake, pond, stream, canal, or wetland.



# Fertilizer-free Zones Near Water or Wetlands



Low maintenance area

- Low maintenance areas should be established 10 feet from the normal high water elevation mark of a lake
- Fertilizer **SHOULD NOT** be applied in low maintenance areas
- Grass clippings should not be left in these areas

# Fertilizer-free Zones



**Your yard is a fertilizer-free zone if heavy rain is expected.**

Check the weather forecast before you decide to fertilize!



- The rainy season is June 1<sup>st</sup> through September 30<sup>th</sup>.  
Plan your treatments carefully.  
**Do not apply if heavy rain is expected.**
- Fertilizer applied before a heavy rain event, tropical storm, or hurricane washes into streets and storm drains, causing water pollution



# Fertilizer-free Zones

Every yard in Orange County is located in a watershed. Being careful with grass clippings, fertilizer, and pesticides will prevent contaminants from flowing into our lakes and rivers.

Always keep impervious surfaces such as the following free of pollutants:

- Concrete Areas
- Sidewalks
- Driveways
- Streets
- Storm Drains

(Using a deflector shield helps keep fertilizer off cement.)





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# Am I responsible for compliance by my lawn care professional?

- ✓ Absolutely, if they are working on your property

Here are some things you should do:

- Ensure the applicator's license is valid
- Make sure grass clippings are blown back onto your yard or collected for proper disposal, never blown into the street or storm drains
- Request landscape treatment only when necessary. If needed, sparingly use fertilizer with micronutrients or that contains slow release nitrogen and no phosphorus unless a soil test indicates deficiency



Following the rules will keep you and your landscape professional from incurring penalties!



**Orange County**  
**Click on the Link to Take**  
**the Quiz and Become**  
**Citizen Certified**

[http://apps.ocfl.net/dept/CEsrvcs/epd/fertilizer\\_form.asp](http://apps.ocfl.net/dept/CEsrvcs/epd/fertilizer_form.asp)

