

Name _____
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Date _____
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Organic Fertilizers	Inorganic Fertilizers (Scotts / Vigoro / Miracle-Gro)
<p>1. <u>animal manure</u></p> <ul style="list-style-type: none"> - improves soil structure - adds nutrients - beneficial bacteria <p>2. <u>green fertilizers</u></p> <ul style="list-style-type: none"> - plants tilled back into soil (ex . grass clipping and corn husk) - adds humus - increases water retention <p>3. <u>compost</u></p> <ul style="list-style-type: none"> - leftover food scraps - decomposing organic matter 	<p><u>Pros:</u></p> <ul style="list-style-type: none"> - easy storage - easy use - adds nutrients - increases crop yield <p><u>Cons:</u></p> <ul style="list-style-type: none"> - temporary fix - no beneficial bacteria - doesn't improve water retention

SOIL CHEMISTRY Questions

Using the Fertilizer Recommendation Table, answer the following questions:

1. It is that time of the year when you are preparing your backyard for your spring plantings. You do a soil quality test and it indicates that the nitrogen levels are high, the phosphorus is low, and there is a medium potassium level. What NPK blend is best to apply to your soil to get it ready for plants?

4-10-6 NPK blend

2. It's also that time of year that you need to get your front yard in order. In fact you decide to do this first to avoid the "bad neighbor effect" of lowering property values due to unsightly front-yard landscaping. The front yard, which has less of a tree canopy, yields different soil quality results than the backyard did. The front yard planting beds are low in nitrogen, medium-low in phosphorus, and register medium-high levels of potassium. What NPK blend is best to apply to your soil to get it ready for plants in this part of your yard?

8-9-5 NPK blend

3. You want to start a tomato garden in your side yard because you have no room in your backyard or front yard. The optimal pH range for tomato growth is 6.0-6.8, but your soil indicates a pH reading of 7.8. What action can you take to adjust the pH of the soil that you are going to transfer your starter plants into to maximize the productivity of your tomato plants?

add a soil acidifier: sulfur or peat moss to lower the pH

4. You have one last patch of yard that has just enough room for one more planting. You remembered that way back in the day you did an experiment with radish seeds. You remember so vividly because you really wanted to do the experiment with white icicle radishes, but your APES teacher stuck you with the French breakfast and cherry belle varieties. You have never recovered from the disappointment ... Icicle radishes grow real well in soil with a pH of 6.0-7.0. This area of your yard happens to have some spruce trees nearby that have dropped their needles for years. The soil pH in this area registers at 5.5. What action can you take to adjust the pH of the soil before you plant your radish seeds?

add lime (CaCO₃) to raise the pH