

WHY DOES A FARMER ... ?

SIMPLE ANSWERS TO QUESTIONS ABOUT FARMING PRACTICES

Q: Why does a soybean farmer use herbicides?

A: To maximize soybean production (yield in bushels per acre), farmers use herbicides to kill weeds that compete with the soybean plant for sun, water and soil nutrients. A weed-free field also makes it easier to harvest the crop.

Q: Why does a soybean farmer use conservation tillage practices such as ridge-till, mulch-till or no-till planting?

A: Dried plant residue from the previous crop not only holds the soil in place and prevents erosion, it also acts as mulch – helping to keep the soil moist and providing a barrier to weed growth. Farmers refer to use of this dead plant material as residue management. In fact, many farmers specifically plant certain crops on a rotational basis to secure the benefits of plant residue from one crop for production of another. While many of these practices involve the use of expensive equipment, soybean farmers benefit in the long run because they increase production, save time and fuel, reduce soil erosion and protect groundwater.

Q: Why do soybean farmers rotate their crops?

A: Continually planting one crop year after year depletes the soil of certain nutrients. Soybeans are a popular candidate for crop rotation systems because, as nitrogen-fixing legumes, they improve soil fertility. Other advantages of crop rotation include erosion control, weed and plant disease control, convenience and efficiency, and spreading financial risks by planting more than one crop.

Q: Why do farmers apply fertilizer to their crops?

A: A fertilizer is a material that supplies nutrients to plants. Plants, like humans, need a “balanced diet” in order to thrive. Farmers supplement the

nutrients present in the soil with fertilizer to achieve a “balanced diet” for optimum plant production. As a cost and environmental consideration, farmers use only enough fertilizer to supplement available soil nutrients and raise soil fertility to the level actually required by the crop. Fertilizers most commonly used are comprised of nitrogen, potassium and phosphorus – in varying amounts dependent upon crop needs. In addition to these three nutrients, the essential elements of plant nutrition are calcium, magnesium, sulfur, iron, boron, manganese, zinc, molybdenum, copper and chlorine.

Q: Why do farmers with rolling, hilly ground use practices such as grassed waterways, contour buffer strips, terraces and pasture plantings?

A: Farmers whose land is not flat have to employ different means of conservation tillage practices to protect their land from erosion by wind and water. With practices such as grassed waterways, contour buffer strips and pasture plantings, farmers hold high-risk hilly soil in place by planting grasses that tightly hold the soil and minimize soil loss due to water runoff.

