

How We Grow

Flinchbaugh Farms Hellam, PA

We are committed to building the long term agricultural value of the land we farm with a goal of providing safe, high quality products for our consumers and end users. To ensure that we are able to provide these top-notch products and protect our environment and conserve our resources we utilize sustainable management practices including crop rotations, an Integrated Pest Management (IPM) program, no-tillage planting, cover crop planting, soil and plant tissue sampling, and GPS guided and controlled nutrient placement. Everything we do is a systems approach. Each and every practice we use is integral in achieving our yield, conservation, and sustainability goals.

Conservation of the land we manage is extremely important to your farmland and to our business. Managing for high yields is not only important to the farmer, but also important to you as the owner as it helps to enhance the agricultural value of your farm for generations to come. It would be impossible to manage for high yields without striving to conserve your farms precious soil and water resources.

In accordance with Pennsylvania State Law, we will have a Conservation Plan written and will use it to guide us in our production practices. Also, if manure is used on the farm as an organic source of fertilizer, per Pennsylvania Law, a Manure Management Plan will be written to guide the land application of manure.

Crop Rotations The field crops we grow include the following:

Field Corn

Soybeans

Winter wheat

-Harvested in July and then planted with a late crop of soybeans

String Beans

Hay

It is important to rotate crops from year to year in order to break up disease and insect cycles within the soil. A typical crop rotation we use is a four-year rotation including two years of corn, followed by one year of soybeans, followed by one year of winter wheat double cropped with soybeans. String Beans are a specialty crop we grow. They are grown the year following winter wheat and double crop soybeans. The Hay we grow in our farming operation is grown on farms not suited for grain crop production.

IPM An Integrated Pest Management (IPM) program is an effective and environmentally sensitive approach to pest management that relies on a combination of common-sense practices. Our IPM program uses current, comprehensive information on the life cycle of pests (insects, weeds, viruses, etc) on our farm and their interaction with the environment. This information, in combination with available control methods, including cultural, biological, mechanical and chemical, is used to manage pest damage by the most economical means and with the least possible hazard to people, property and the environment.

Our IPM program does not use a single pest control method, but rather, a series of pest management evaluations, decisions and controls. We use a four step approach:

1. **Set Action Thresholds.** Before any pest control action, we set action thresholds, a point at which pest populations or environmental conditions indicate that pest control action must be taken. Sighting a single pest does not always indicate control is needed. Rather the level at which pests will become an economic threat is critical to guide pest control decisions.

2. **Monitor & Identify Pests.** Not all insects, weeds and other living organisms require control. For instance, various organisms are actually beneficial to our farm, such as the lady bug. Accurate monitoring and identification removes the possibility of utilizing control methods that may not be really needed or that the wrong one may be used.
3. **Prevention.** Preventing pests from becoming a threat is clearly the first line of defense against pest control. Flinchbaugh Farms utilizes various cultural methods, such as rotating between different crops, selecting pest-resistant varieties, using cover crops to grow in the 'off season' in order to compete with weeds. These are generally very effective.
4. **Control.** Once monitoring, identification and action thresholds indicate that pest control is required and preventive methods are no longer effective or available, IPM evaluates for the proper control method for both effectiveness and risk. Biological and mechanical controls are chosen first at Flinchbaugh's, such as using cover crops to compete with weeds in order to keep weed levels low. If further monitoring, ID and action thresholds indicate these options are not working, then additional pest control methods are employed, such as targeted spraying of pesticides.

No-tillage No-tillage is used as a method of growing crops without disturbing the soil through tillage. No-tillage mimics the actions of a forest floor with many different layers and stages of organic matter blanketing the soil surface. At Flinchbaugh Farms the implementation of our no-tillage farming practices have increased the soil organic matter, limited the runoff of soil particles during heavy rainfall events, increased the ability of the soil to absorb and hold water, and have increased the populations of soil microbes involved in cycling nutrients and making them available to our crops. No-tilled soils with various layers of crop residue are cooler during the hot growing season, they hold water longer, and are often more resilient as the biological fertility of your soil is greatly improved.

Cover Crops By choosing to plant cover crops across our farm acres, we are reaching our conservation, environmental, cultural and economic goals. A cover crop is a crop planted primarily to manage soil erosion, soil fertility, soil quality, water, weeds, pests, diseases and biodiversity in our fields. Cover cropping is widely accepted as a sustainable agriculture practice. After fall harvest we will plant winter rye, wheat, winter radishes, turnips and other like crops as a cover crop to protect our soils. Cover crops go hand-in-hand with no-tillage in increasing the soil health of your farm. Maintaining live roots in the soil year around is vital in maintaining soil microbes, anchoring soil to the farm while protecting it from heavy rainfall events, and capturing potentially excess nutrients in the soil and holding onto them.

Soil and Plant tissue sampling We choose to pull soil samples every two years to monitor soil fertility levels. A small representative sample is pulled and sent away to a laboratory where nutrient levels are determined. Maximum yields cannot be achieved without the proper levels of nutrients. We also do not want to over apply nutrients in excess of the current crops needs. We use plant tissue sampling to fine tune our crop fertility during the growing season. Based on the growing conditions of the current season, a crops nutrient needs may vary. This allows us to make in season applications of nutrients and not rely on applying an estimation of nutrient needs all prior to the crop being planted and then hoping they remain available to the crop throughout the course of the year.

GPS guided and controlled nutrient placement GPS is an integral part of managing the crops we grow. Fertilizer, Seed, and Pesticides are all applied using the guidance of GPS. This technology is utilized by automatically turning sections of the application equipment on and off in order to ensure there is no overlapping of product being applied. Rate controllers increase and decrease product flow to allow for accurate placement as ground speeds change.