

SUNFLOWERS 101: THE BASICS



If you have ever wondered whether sunflowers could be a profitable crop for you, consider the following: this fruiting plant is one of the most widely adapted crops in all the world. First domesticated in North America between 3,000 - 4,800 years ago, today the sunflower flourishes in temperate climates from Russia and the Ukraine to the Mediterranean, Argentina and across the United States and Canada. Some strains of the species average seed yields between 1,200 and 2,000 pounds per acre, and as much as 3,000 pounds per acre under idyllic growing conditions. Certain oilseed varieties can produce upward of 50 percent oil by weight.

MARKETING STRATEGY

There are numerous variations of sunflowers available for commercial production. These include sunflowers cultivated for their impressive yields of oleic acid rich oil, those grown for birdseed and a wide assortment of large kernel confectionery sunflowers developed specifically for human consumption.

NuSun® oil is a mid-oleic sunflower oil that is low in saturated fat. NuSun® sunflower oil is an alternative to other oils that can be higher in saturated fats for snack products like chips.

Confections:

Confection sunflower seeds are normally black with white stripes and approximately five eighths of an inch long. The heavy hull accounts for approximately half the weight of the seed and is loosely fixed to the kernel inside. Seed size is primarily affected by plant genetics, but also by planting density and weather.

Sunflower seeds are graded according to size and then separated into groups. The largest size will go to the in-shell market. Medium-sized seeds are usually hulled for the kernel market. The smallest size will go to the bird and pet feeding market.

High Oleic Market:

High oleic sunflower oil is used in bakery applications, spray-coating oils for cereal, crackers and dried fruit. It is also used in non-dairy creamers and for many types of frying along with other uses.

Bird Seed Market:

Processed and bagged for bird food.

As a commercial producer, the success of your sunflower crop begins with the variety of seed you choose. Purchase your seed from a reputable source to ensure vigorous plants with a high germination rate.

SELECTING THE RIGHT VARIETY

Determining what variety of sunflower you could grow ultimately depends on to whom you will be selling and how you will deliver your crop to market. Sunflower seeds grown for bird feed will typically go to a milling operation. Oilseed producers will need to move their crops to a pressing plant for processing.

If disease has been an issue in the past, select varieties with better tolerance or resistance, depending on what diseases you have encountered (sclerotinia, phomopsis). Select Downy Mildew Resistant (DMR) products with PI 15 or PI 8 gene for better Mildew control. Ensure all products are seed treated to decrease insect pressure (wireworm/cutworm) or disease (pithium, rhizoctonia, fusarium) while emerging. Look at the bag to know what type of seed treatment has been applied.

PLANTING

Seed Size: Selecting the proper seed size is crucial. Seed sizes are normally classified as size 2, 3, 4 and 5. When selecting the proper seed size, remember that the smaller the number, the bigger the seed. Seeding tools like corn planters tend to use larger seed size (2 and 3), while air seeders tend to use smaller seed sizing (3, 4 and 5).

Seed Depth: Seed to moisture; 1 ½" to 2" (Optimum 2 inch). Optimum speed 4-4.5 mph for consistent seed placement (planter). Follow tillage paths to avoid unnecessary roughness in the field. Populations: Consider Variable Rate Technology (VRT) if equipped. Heavy Soils: 24,000-26,000. Light Soils: 17,000-21,000. Populations are also changed depending on what marketing product you are seeding:

- NuSun®: 20,000-26,000 seeds/acre
- Confections: 16,000-22,000 seeds/acre
- Dehull: 18,000-24,000 seeds/acre

Germination:

Soil temperature is extremely important when deciding when to seed your sunflowers. Cold soil temperatures can decrease effective germination. Sunflowers should be planted when soil temperatures are at or above 50° F.

Fertility:

Managing sunflower fertility starts with a good soil test. Macronutrients such as nitrogen, phosphorus and potassium are the first steps in effect nutrient management. From there, tissue tests are a good way to identify any micronutrients that may be short within the plant. The rule of thumb is to always manage your macronutrients first, then move on to micronutrients.

HERBICIDE APPLICATIONS

Regardless of sunflower varieties, a pre-emergence herbicide is a smart choice. Using products like Spartan® Charge to help combat early arrival weeds such as Kochia and Russian thistle can minimize risk in most operations. If weed pressure is an issue, select a product with better weed control options. Express® tolerant varieties and Clearfield® varieties can give you additional weed control options. Express® herbicide and Destiny® HC are designed to offer weed control to broadleaf weeds such as Canada thistle, lambs quarter and wild buckwheat. Clearfield® Beyond® + Class Act® NG® adjuvant can offer residual control, plus potential control on cocklebur, nightshade, lanceleaf sage and smartweed species.

No matter what sunflower market or variety you choose for your operation, continued in-season monitoring is crucial to optimize yield. From VRT to in-season scouting with the use of in-season imagery, every tool can aid in your yield potential. Insect control is always a concern and imminent, but field scouting and timely applications of insecticide treatments using products like Delta Gold® with PowerLock® can be beneficial for any grower.

ROTATION:

Three-year rotation is optimum, common practice is two years. Avoid sunflowers in fields of historic sclerotinia and heavy disease pressure to any susceptible sunflower in general.

