

GROWING COTTON



Upland Cotton is the most common type of cotton grown in the United States **Cotton Belt**. The states that make-up the Cotton Belt are Alabama, Arizona, Arkansas, California, Florida, Georgia, Kansas, Louisiana, Mississippi, Missouri, New Mexico, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, and Virginia. These states are usually ideal for growing Upland Cotton because of its need for a long, sunny growing season, with at least 160 frost-free days.

In Georgia, cotton **planting** (introduction of seeds into soil) generally begins in April and may continue until early June. When conditions are right, the planted cotton seeds **germinate** (sprout) and emerge through the soil in about one to two weeks. The **cotyledons**, or first two visible leaves on the young seedlings, absorb sunlight into the plants, and the sunlight is converted into carbohydrates through a process called **photosynthesis**. About a week after seedling establishment, the first **true leaf** (leaves produced after the cotyledons) appears. True leaves take over the photosynthetic task for the duration of the plants' lives.

The plants continue to grow, adding leaves and height. In approximately five to six weeks, small flower buds called **squares** (a small bud covered with fringed leafy parts called **bracts**) will appear on the cotton plants. The squares swell and the buds inside begin to push through the bracts and, in eight to nine weeks, white flowers bloom. These flowers contain both male and female reproductive parts that enable **self-pollination**

(when each flower's male "**anther**" fertilizes its female "**stigma**"). Pollination of the flowers usually occurs within a few hours after the flowers bloom. On the second day, the flowers have a pink blush, and change to red by the third day. Within 5 to 7 days after flowers appear, they dry and fall from the plants, exposing the immature **cotton bolls** (segmented pods that each contain seeds). The bolls are considered fruit because they contain seeds from which the fibers grow and thicken. The bolls enlarge as the cotton fibers inside mature and thicken with their primary growth substance called **cellulose** (a carbohydrate). Cellulose is the chief component of the cell wall in most plants.

About sixteen to seventeen weeks after planting, the cotton bolls begin to split open along the segment lines, or **carpels**, and they dry out to reveal the underlying cotton and seed segments, which are called **locks**. The dried carpels, known as **burs**, hold the locks of cotton and seeds in place. About three to four weeks after the bolls open and the fiber is fully dried and fluffed, it is ready for **harvest** (picking). After the fiber is harvested, it is transported to the cotton gin.

Source: "Cotton Growth and Development"
UGA Cooperative Extension

GROWING STAGES OF COTTON

