## **Glossary**

**Abdomen:** Third and posterior-most region of the insect body.

Active ingredient (AI): Biologically active component of a pesticide preparation; also known as toxicant.

Aestivation: Period of suspended development and/or reduced activity (diapause) for a species that occurs during summer

Alate: Winged form of an insect species (see apterous).

Antenna: Paired, segmented, sensory appendages arising from the front of the epicranium (=skull) of insects and related animals.

**Apical:** At or near the tip of an organ; the point farthest from the midline of the body.

**Apical meristem:** Growing point found at the tip of the stem or root; also known as the terminal bud on shoots.

**Apomixes:** Type of parthenogenesis (=reproduction without fertilization) in which no meiosis occurs.

Apterous: Wingless form of an insect species (see alate).

**Arthropoda:** Major Phylum of animals to which the insects, spiders, and mites belong; animals with jointed legs and a hardened body covering called the exoskeleton.

Augmentation: Strategy for biological control involving mass rearing and release of natural enemies for control of a pest species.

**Axillary meristem:** Bud located on the stem at the point of leaf attachment.

**Basal:** Near the point of attachment of an organ to the body; nearest the midline of the body.

**Beak:** Extension of mouthparts to form a tubular structure used for piercing host tissues to remove blood of animals or plant fluid.

**Biological control:** Control of pest species by using natural enemies such as parasitoids, predators, or pathogens.

**Biotypes:** Genetically distinct subgroups within a species that exhibit distinctive behavioral or physiological traits (such as differential responses to pest-resistant crop varieties), butare usually not distinguishable anatomically.

**Bivoltine:** Denotes a species that completes two generations per year.

**Book lungs:** Paired respiratory organs located on the abdomen of spiders.

**Brachypterous:** Having short wings that are not suitable for flight.

**Bt-resistant:** Property of a pest species for which the bacterium, *Bacillus thuringiensis*, is no longer an effective control agent because the species can detoxify the bacterial toxin.

**Bud-blasting:** Result of feeding by an insect (normally with piercing–sucking mouthparts) in which buds of host plants die as a result of toxic affects of salivary secretions.

C-3 plant: Plant such as a cool-season grass that grows best under cool, moist conditions, and whose first product of photosynthesis is a 3-carbon acid; a plant that also exhibits photorespiration.

C-4 plant: Plant such as warm-season grass that grows best under warm (summer) conditions, and whose first product of photosynthesis is a 4-carban acid; a plant that does not exhibit photorespiration.

**C-4 photosynthesis:** Specialized form of photosynthesis found primarily in grasses, which allows efficient conversion of atmospheric carbon dioxide to plant tissues.

Cantharidin: Irritating substance contained in tissues of blister beetles, which causes blister formation on the skin or lining of digestive system of animals.

Carapace: Hard covering (shell) of Crustaceans such as crayfish and crabs.

Caste: Any set of individuals in an insect colony that is morphologically distinct and specialized in behavior.

Caterpillar: Larval stage of a moth or butterfly.

Cercus (pl., cerci): Paired appendages that arise near the posterior end of the insect abdomen.

**Chelicerae:** Specialized appendages on the head of spiders and mites which are used in feeding.

**Chitin:** Important component in the chemical structure of the exoskeleton of Arthropoda.

Chorion: Protective covering over the surface of an insect

**Chlorosis:** Yellowish or reddish discoloration in plant leaves which results from the absence of chlorophyll; may be the result of feeding by insects or mites.

Classical biological control: Program that includes importing natural enemies for the purpose of controlling an imported pest species.

Clavate: Shape of an organ or appendage that has a small diameter basally but enlarges toward the tip.

**Cocoon:** Silken or fibrous covering constructed by an insect larvae for the purpose of protecting the pupal stage.

**Companion crop:** Crop such as a grass or small grain species that is sown with a forage legume species to provide cover for the seedling stages of the legume.

Complete metamorphosis: Insect life cycle in which the primary stages are egg, larva, pupa, and adult.

Compound eye: Eye that is made up of many individual facets, each with its own lens and sensory organ.

Continuous stocking: Method of grazing forage crops with livestock in which the animals have unrestricted and uninterrupted access to the crop for a period of weeks or months.

Cornicles: Pair of secretory structures that are usually elongate and tubular, and arise from the dorsal surface of the abdomen of most aphids. The usual secretions from cornicles are waxes or alarm pheromones.