Kansas CCA Exam Study Material Prepared By Dr. Kevin Donnelly with Kansas State Agronomy

Quiz I

A	Vapor drift	_____	The chemical in a formulated product that is responsible for the herbicidal/insecticidal/fungicidal effects as indicated on the product label.
B	Spray drift	_____	Substance that enhances the effectiveness of a pesticide.
C	Trade name	_____	A mixture of two or more compatible pesticides intended for simultaneous application.
D	Common pesticide name	_____	Gaseous phase of a pesticide used to destroy insects, pathogens, weed seeds, or other pests in soil or grain bins.
E	Active ingredient	_____	Amount of pesticide that remains in the soil and may affect the next crop; also called carryover.
F	Adjuvant	_____	Amount of pesticide that remains in or on the harvested crop.
G	Surfactant	_____	Movement of airborne spray droplets of a pesticide outside the intended area of application.
H	Tank mix	_____	A material that favors or improves the emulsifying, dispersing, spreading, wetting, or other surface modifying properties of pesticides in solution.
I	Fumigant	_____	Name given to a specific pesticide active ingredient. Many pesticides are marketed under a number of different names, but have the same active ingredient name.
J	Residual	_____	Name given to a product sold by a company to distinguish it from similar products made by other companies.
K	Residue	_____	The movement of chemical vapors from the area of application.

Quiz II

A	Pest resurgence	_____	Egg, larvae, pupae, adult
B	Secondary pest outbreak	_____	Egg, nymph, adult
C	Gradual metamorphosis	_____	Viviparous development; adults give birth to live young
D	Complete metamorphosis	_____	Sex attractant used to lure insects into traps.
E	Parthenogenesis	_____	Ability of a pest to come back faster after pesticide use if the pesticide also inhibits natural enemies.
F	Pheromone	_____	Rapid pest development due to unintentional control of natural enemies when controlling another target pest.

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Quiz III

A	Plant disease triangle	_____	Non-living, physical or chemical, includes solar radiation, temperature, humidity, and pH; used in context of such an effect.
B	Beneficial organisms	_____	Diagrammatic representation of the three key factors contributing to plant diseases - 1) susceptible hosts, 2) pathogen presence, 3) proper environmental conditions.
C	Phytotoxic	_____	Pertaining to living organisms.
D	Incubation	_____	Organisms that reduce pest numbers or improve soil or plant quality.
E	Infection	_____	Transfer of some form of the pathogen to the host plant
F	Inoculation	_____	The disease symptoms appear, economic damage may result
G	Biotic	_____	The pathogen becomes established in the host plant
H	Abiotic	_____	Organisms that directly or indirectly causes damage to crops.
I	Pests	_____	Injurious or toxic to plants.

Quiz IV

A	Worker Protection Standard	_____	Lethal dose of a substance that kills 50% of the test organisms expressed as mg per kg body weight. Also the concentration in parts per million (ppm) or parts per billion (ppb) in the environment (usually water) that kills 50% of test organisms exposed.
B	Personal Protective Equipment	_____	Contact with a pesticide or toxin over a short period of time.
C	Re-entry interval	_____	Contact with a pesticide or toxin over a long period of time, usually at low levels.
D	Chronic exposure	_____	Substance that may initiate cancerous tumor formation in animals.
E	Acute exposure	_____	Clothing and protective devices required by EPA to be worn by users of pesticide products.
F	Toxicity	_____	Pesticides that 1) reduce risks to human health; 2) reduce risks to nontarget organisms; 3) reduce the potential for contamination of environmental resources.
G	LD50 or LC50	_____	A time period set by EPA that restricts individuals from entering a pesticide-treated area.
H	Carcinogen	_____	Degree to which a pesticide is poisonous; the ability of a substance to interfere adversely with the vital processes of an organism.
I	Reduced-risk pesticides	_____	EPA regulations requiring protective clothing and practices designed to protect users of pesticides by reducing pesticide exposure.

Quiz V

A	Economic Injury Level	_____	The use of practices to alter pest reproductive capacity, such as releasing sterilized males.
B	Economic (Action) Threshold	_____	The use of practices other than chemical and biological controls to reduce a pest population or its impacts. Such practices include tillage, row spacing, irrigation, fertility, timely harvest, and all forms of mechanical pest control.
C	Best Management Practice (BMP)	_____	The process of conserving, augmenting or introducing beneficial living organisms to reduce a pest population or its impacts. It includes the use of insects, nematodes, mites, fungi, bacteria, viruses, plants, vertebrates, and other living organisms.
D	Integrated pest management (IPM)	_____	A component of cultural pest control that uses physical methods to reduce a pest population or its impacts. Mechanical controls include cultivation, hoeing, hand weeding, mowing, pruning, or vacuuming.
E	Chemical pest control	_____	Also called Good Farming Practices. Practices recognized as effective and practical means for producing a crop in an economically and environmentally sound way.
F	Biological pest control	_____	The pest damage level at which the cost of controlling the pest population equals the value of the crop lost.
G	Cultural pest control	_____	Pest density at which control measure should be taken to avoid crop value loss from reaching the Economic Injury Level.
H	Mechanical pest control	_____	A sustainable approach combining prevention, avoidance, monitoring & suppression strategies in a way that minimizes economic, health, and environmental risks.
I	Autocidal pest control	_____	The use of pesticides to reduce a pest population or its impacts.

Quiz VI

A	Pathogen	_____	Unicellular organisms that include free living, saprophytic, and parasitic forms.
B	Parasite	_____	Organisms which lack chlorophyll and vascular tissue and range in form from a single cell to a body mass of branched filamentous hyphae that often produce specialized fruiting bodies. Fungi cannot produce their own food.
C	Parasitoid	_____	A living organism serving as a food source and refuge for a parasite.
D	Plant parasitic nematodes	_____	An organism which lives on or in another living organism and obtains part or all of its nutrients from that other living organism.
E	Host	_____	An insect that feeds on and develops in another insect, and causes death in the host insect.
F	Vector	_____	Living agents that cause diseases in plants and animals.
G	Viruses	_____	Microscopic, non-segmented roundworms that usually survive in soil, and invade plant roots.
H	Bacteria	_____	Agent that carries pest from one plant to another
I	Fungi	_____	Non-cellular parasites/pathogens comprised of a protein shell and a simple genetic core, usually RNA in plant viruses.

Quiz VII

A	Selective	_____	Pesticide application either over the rows or in-between the rows to reduce the overall application rate per acre.
B	Systemic	_____	Pesticides derived from living organisms such as Bt (Bacillus thuringiensis).
C	Narrow-spectrum	_____	Pesticides that are toxic to a wide range of organisms.
D	Broad-spectrum	_____	A pesticide that is toxic to an organism by contact rather than a result of translocation or ingestion.
E	Translocation	_____	The mechanism by which pesticides affect target organisms.
F	Mode of action	_____	Pesticides that act on a limited range of species.
G	Contact pesticide	_____	Applied after emergence of the specified weed or planted crop.
H	Biological pesticides	_____	Applied to the soil surface prior to emergence of the specified weed or planted crop.
I	Banded pesticides	_____	Applied and tilled into the soil before seeding or transplanting.
J	Postemergence	_____	Pesticides that are toxic primarily to the target pest (and perhaps a few related species), leaving most other organisms, including natural enemies, unharmed.
K	Preemergence	_____	Not localized; movement away from the area of application to other plant tissues through translocation.
L	PPI (Preplant incorporated)	_____	Actively moved within and between plant tissues and organs.

Quiz VIII

A	Scouting	_____	Occurs when a herbicide does not break down during the season of application and persists in sufficient quantities to injure succeeding crops.
B	Sampling	_____	Contamination derived from diffuse sources such as construction sites, agricultural fields, and urban runoff.
C	Setback	_____	A means of expression concentration; parts of analyte per billion/million parts of sample.
D	Herbicide carryover	_____	Ability of a pesticide to resist degradation as measured by the period of time required for breakdown. Depends on environment and chemical properties.
E	Point source pollution	_____	Contamination from specific identifiable source.
F	Non-point Source (NPS)	_____	Any valid method to determine a representative value for a field parameter.
G	PPB/PPM	_____	Sampling or observing crops to determine levels of pest populations and disease; also used to assess crop health and yield potential, and levels of beneficial insects.
H	Persistence	_____	The distance from sensitive areas, such as surface water, wetlands, or tile drain inlets, where no pesticides are to be applied.

Quiz IX

A	Pesticide resistance	_____	Genetically based mechanisms within host plants which hinder pest development.
B	Transgenic resistance	_____	The inherited ability of an organism to survive and reproduce following exposure to a dose of pesticide normally lethal to the wild type.
C	Genetic resistance	_____	Organisms of the same species and variety that differ in their ability to parasitise varieties of a given host, or that differ in their reaction to pesticides.
D	Tolerance	_____	Areas, untreated with pesticides, provided to preserve susceptible populations of pests.
E	Selection Pressure	_____	An action, event, or chemical that preferentially allows survival of one group over another.
F	Transgenics (bioengineered organisms)	_____	The inherited ability of a species to survive and reproduce after pesticide treatment. Also refers to the ability of a crop to yield satisfactorily in presence of pests or adverse environmental conditions.
G	Refugia	_____	An organism whose genome has been modified to incorporate pest resistance by the introduction of external DNA sequences into the germ line or gene transfer from outside the normal range of sexual compatibility.
H	Trap crop	_____	Plants or animals that contain DNA derived from a foreign plant or animal.
I	Race or strain	_____	A crop that attracts and concentrates insect pests.

Quiz X

A	caution	_____	Most toxic - Category I
B	danger	_____	Intermediate toxicity - Category II
C	warning	_____	Least toxic - Category III

Quiz XI

A	Dry formulations	_____	WDG
		_____	EC
B	Liquid formulations	_____	WP
		_____	L
		_____	G
		_____	S
		_____	DF