HOCKMEYER TECHNOLOGIES FOR AGROCHEMICALS

CROP QUANTITY & QUALITY RELY ON CROP PROTECTION

Pesticides enable farmers to produce safe, quality foods at affordable prices. They also help farmers provide an abundance of nutritious, all-year-round foods. It makes fruits and vegetables more abundant and affordable.

THE ROLE OF AGROCHEMICALS IN AGRICULTURE

- All farmers use pesticides, including organic farmers. The difference is organic farmers can only use pesticides from natural sources.
- Food crops must compete with 30,000 species of weeds, 3,000 species of worms and 10,000 species of plant-eating insects. And threats don’t stop once crops leave fields – bugs, molds and rodents can all cause damage in storage. Pesticides can prolong the life of produce and prevent post-harvest losses.

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TYPES OF PESTICIDES

There are many different types of pesticides; each is effective against specific pests.

- **Algaecides** kill and slow the growth of algae.
- **Antimicrobials** control germs and microbes (bacteria and viruses).
- **Disinfectants** control germs and microbes (bacteria and viruses).
- **Fungicides** control fungal problems like molds, mildew, and rust.
- **Herbicides** inhibit the growth of unwanted weeds.
- **Insecticides** control insects.
- **Insect Growth Regulators** disrupt the growth and reproduction of insects.
- **Rodenticides** kills rodents like mice, rats, and gophers.
- **Wood Preservatives** make wood resistant to insects, fungus and other pests.

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AGRICULTURAL FLOWABLES: PESTICIDES/FUNGICIDES

- A flowable formulation contains tiny particles of active ingredient suspended in a liquid (usually water) and milled to reduce the average particle size.
- Physical Properties: Flowables typically have a higher viscosity (are “thicker”) than water alone because of the presence of thickeners/suspension aids. Developing a flowable is a balancing act between the need to keep the viscosity high enough that particles do not sink rapidly but low enough that the material pours out or pumps efficiently.

LAB TESTING EQUIPMENT

MICRO MILL

NEXGEN™ MICRO MILL

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PROUDCTION
EQUIPMENT
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HCP IMMERSION MILL

- Since its introduction, the Hockmeyer HCP Immersion Mill has been leading the way in milling technology. It has opened the door to greater productivity in the particle reduction industry.
- The patented design uses rapid recirculation to produce 'Homogeneous Batch Development', achieving faster grinds and tighter particle distributions.

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NEXGEN™ VACUUM RECIRCULATION MILL

NEXGEN™ is the state of the art in particle size reduction. Rapid-flow vacuum milling designed to enhance efficiency and boost profits by reducing process times, increasing yields, and eliminating air entrapment. It facilitates faster, purer particle size reduction and deagglomeration without the hassle of air bubbles.

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BENEFITS OF NANO AND VACUUM MILLING

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NANO IN AGRO

- Nanotechnology will revolutionize agriculture and the food industry, in farming techniques, enhancing the ability of plants to absorb nutrients, disease detection, and control pests.
- In recent years, the use of nanomaterials has been considered an alternative solution to control plant pests, insects, fungi, and weeds; and silver nanomaterials are used as antimicrobial agents in food packaging.

For additional information:
Applications of Nanotechnology in Agriculture

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CONTROLLING THE AIR

It is essential to prevent air entrainment in the system, which can lead to foaming. When air bubbles are trapped in water, wetting agents can migrate away from the surface of the active ingredient toward the air-water interface of the bubbles. Foaming can cause the active ingredient to “de-mix” from the water, forming aggregates that clog strainers or stick to tank surfaces. When mixing a flowable or suspension concentrates into emulsifiable concentrates, it is essential to watch for heterogeneous flocculation. The solid crystals of a flowable or suspension concentrate get incorporated into the emulsified oil droplets, leading to large aggregates or clumps.

Pesticide formulation types

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CLEANING EQUIPMENT
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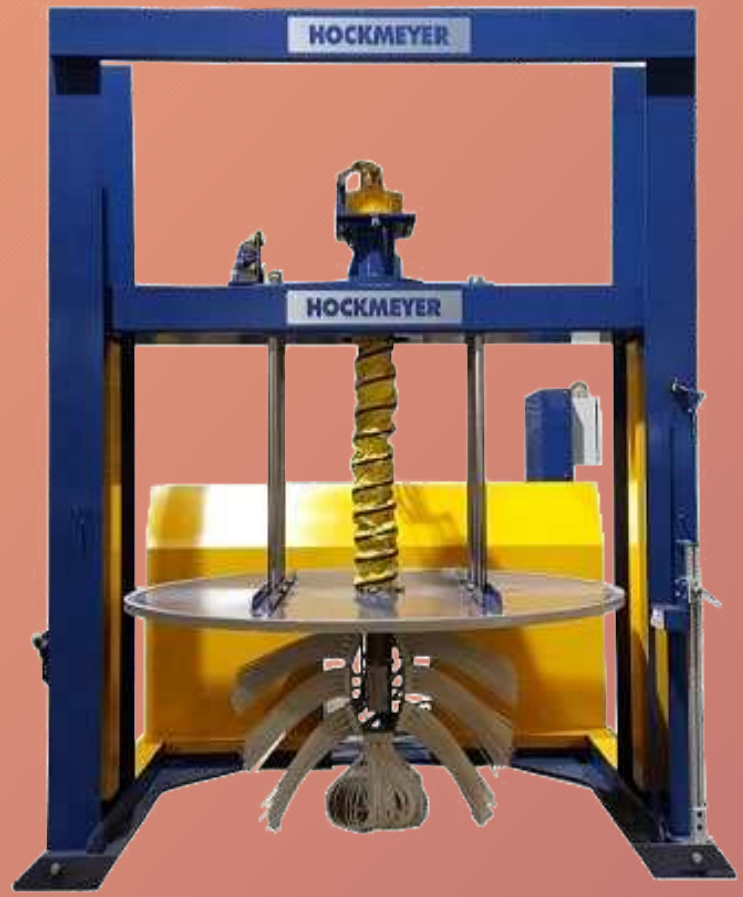
CMX-200 VESSEL WASHER

The Hockmeyer CMX-200 efficiently cleans practically any size tank, tote, or drum. The rotating brush and spray nozzle assembly provides the mechanical scrubbing and soaking action to effectively clean vessels. This design improves productivity and profitability. It also provides a closed system during operation to control solvent vapors and handling of hazardous compounds.



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