

Resource
Magazine's

**OUTSTANDING
INNOVATIONS
2000**



AE50

AE50 2000

Products winning the 2000 AE50 awards represent the cream of the crop developed throughout the world for the agricultural, food and biological systems industries.

The innovations highlighted in this issue were chosen from numerous entries in the competition sponsored by *Resource*. The judges who chose the winners represent all factions of the agricultural, food and biological engineering professions. They selected the best from new products first introduced to the marketplace during 1999. These products are expected to save producers time, costs and labor while improving user safety.

The annual AE50 program has been honoring engineering achievements for more than a decade. Past winners include large companies of all sizes throughout the world.

From improved tractors and implements to computer software and high-tech electronic measuring devices, the 2000 AE50 winners cover a gamut of devices. The AE50 is the only awards program of its kind to reward companies for developments in these areas for agricultural, food and biological systems.

For information on how to enter next year's competition, contact Elowsky at 616-429-0300 ext. 313 or e-mail elowsky@asae.org.

Information on the AE50 and *Resource* magazine is also available at the ASAE Web site: www.asae.org.

AE50 OUTSTANDING



INNOVATIONS 2000

● WP4 reduces water potential measurements to five minutes

The WP4 Dewpoint Potentiometer measures water potential of soils, plant tissue and seed samples using the chilled-mirror dew point method. In the WP4 a sample is equilibrated in a sealed chamber where a thermoelectric element cools a mirror. A photoelectric cell detects the point at which condensation first appears on the mirror and a thermocouple records the temperature. The WP4 uses an internal fan to control the vapor boundary layer and a radiation thermometer to measure sample surface temperature. Thermal equilibrium is not required for an accurate measurement, reducing measurement times to about five minutes.

Decagon Devices Inc.

Pullman, Washington, USA; 509-332-2756



● Hydraulic finger pickup heads and cross conveyers featured on Windrow Merger



The OXBO Windrow Merger combines two forage windrows simultaneously. The merger uses two hydraulically driven finger pickup heads and two cross conveyers to lift and move two forage windrows. The merger can be set up to lift and move windrows on 12- to 18-foot (360- to 540-centimeter) centers. Each pickup head is independently lifted to also allow single windrow merging. Merger pickup and conveying functions are powered by a self-contained hydraulic system driven by tractor power take-off. The tractor operator can adjust head height, speed and merging direction. The merger hydraulically folds from a working width of 30 feet (900 centimeters) to transport width of 13 feet, 6 inches (405 centimeters) from the tractor seat.

OXBO International Corp.
Byron, New York, USA; 716-548-2665

AE50 OUTSTANDING



INNOVATIONS 2000

● Reflectometer remotely monitors soil water content

The TDR100 is a time-domain reflectometer for measuring volumetric water content and bulk electrical conductivity in soil and other porous media. A typical application is remote monitoring of soil water content in agricultural research and crop production. Other applications include ground water monitoring, rock-mass deformation and liquid level detection. The TDR100 applies electromagnetic pulses to probes then samples the reflections and digitizes them for analysis by a data logger algorithm. Up to 512 soil probes or wave guides can be multiplexed and monitored. A Windows support software package facilitates setup and troubleshooting.

Campbell Scientific Inc.
Logan, Utah, USA; 435-753-2342



● Vacuum system uses suction for safe planting



The air-pruning field transplanting system is an automatic transplanter that dislodges and transplants air-pruned plugs and seedlings pneumatically using an impulse vacuum system. During transplanting, a detachable screen is removed and the air-pruning tray becomes a component of the automatic transplanter. Individual plugs and seedlings are pneumatically removed downward through the tray cell. An impulse vacuum dislodges the plugs and seedlings from the open bottom of tray cells. Suction pulls the plugs and seedlings down and plant leaves fold aerodynamically to pass through the cell and drop tube without damage.

International Innovative Technology Inc.
Raleigh, North Carolina, USA; 919-773-0632

AE50 OUTSTANDING



INNOVATIONS 2000

● Custom operators and multi-crop growers could benefit from new headers

The New Holland 2331 and 2332 Discbine Disc Mower-Conditioner Headers are high-speed, high-volume disc cutter bar headers for use on New Holland TV140 Bidirectional™ Tractors. The headers turn the TV140 into a high-capacity self-propelled mower-conditioner, with cab-end mounting for maneuverability, visibility and closer operator proximity to work. Custom operators and large, multi-crop growers will benefit from productivity and performance of the 10-disc modular cutter bar headers, which are easily mounted using the Model BF2330 adapter frame.

New Holland North America
New Holland, Pennsylvania, USA; 717-355-3663



● Case IH takes MX Series Magnum tractors to new heights



Case IH MX Series Magnum tractors offer high performance and operator comfort. The luxury cab features a heated, leather bucket-style seat. The steering wheel, throttle handle, arm rests and optional training seat are also leather. A tinted rear window reduces heat inside the cab. Performance is improved with a 160-gallon (608-liter) fuel tank option on three models. The Case-designed, factory-installed front hitch has a 5,500-pound (2,500-kilogram) lift capacity. Axle improvements increase durability for customers with heavy front loading conditions. The rear hitch lift height is increased for additional clearance.

Case Corp. Racine Tractor Plant
Racine, Wisconsin, USA; 262-636-7854

AE50 OUTSTANDING



INNOVATIONS 2000

● Cotton system versatility expands as new applications are integrated

The Farmscan CANLINK™ 3000 cotton yield system provides information during picking. The operator has instant access to picking rate, weight, area, speed, distance, time and global positioning system information. Sensors stack up to eight sets for maximum flexibility. The CANLINK 3000 has automatic hold functions, 12 tags for spotting during picking and displays in U.S. and metric units. The system platform grows as new applications are integrated. The CANLINK's versatility allows it to be reprogrammed in the field and offers variable rate for up to four products, mapping and soil sampling functions.

Computronics
Western Australia; 61-8-94701177



● Compact TND and TNS Tractors produce up to 36 percent torque rise



The New Holland Model TND and TNS Tractors are a line of compact, powerful, all-purpose utility tractors. TND models have a deluxe, fully suspended, fully enclosed cab in either 2WD or 4WD configurations. TNS models are available in deluxe or standard models. The six models in the series — TN55D, TN55S, TN65D, TN65S, TN75D and TN75S — produce up to 36 percent torque rise and run at low-rated speed of 2,300 rpm with three-cylinder displacement engines.

New Holland North America

New Holland, Pennsylvania, USA; 717-355-3663

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INNOVATIONS 2000

● Six products can be applied with the Soilection® AirMax 2000™

The 300-cubic-foot (9-cubic-meter) Soilection® AirMax 2000 box has two main compartments for dry agricultural crop improvement products separated by a 50/50 or 60/40 movable partition. Right and left hand conveyors transport product from each compartment to the rear of the machine and pneumatically deliver it to 32 dual fin nozzles for a 70-foot (2,100-centimeter) distribution width. Up to six products can be applied by using an added granular bin, the SprayMax™ liquid system and two Talon™ liquid injection systems. The Falcon II™ controller adjusts application rates of delivered products simultaneously based on agronomic prescription maps and ground speed coordination via global positioning system.



Ag-Chem Equipment Co. Inc.

Minnetonka, Minnesota, USA; 612-945-9006

● New agricultural tire offers more even wear and improved stability



The Titan 14.9R46 Hi Load 8 Star Radial delivers improved tread wear, reduced lug induced vibration and higher load capabilities over standard radials. The lugs have been broadened and buttressed for more even wear, reduced lug flex and improved stability at transport speeds. The lug shoulders are rounded to minimize crop interference in post emergence field work and turf damage during turns. The tire features T-99 tread compound to protect against stubble damage such as tearing, chunking and scarring. The Hi Load Radial's tread-to-void ratio allows a 47 percent higher load capacity over the standard tire.

Titan International Inc.

Quincy, Illinois, USA; 217-228-6011

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INNOVATIONS 2000

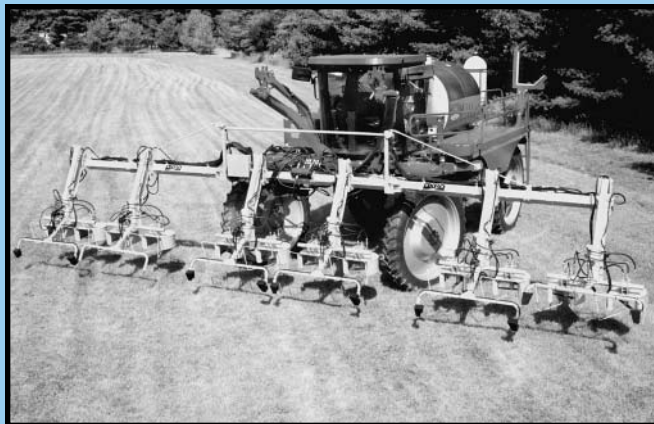
● Detasseler matches any corn or seed planting pattern

The OXBO TasselStalker is a tassel cutter and four-tire puller system for removing tassels from female corn parent plants in the seed corn industry. The detasseler tool bar is mounted on conventional high clearance sprayers, which eliminates the need for a dedicated machine.

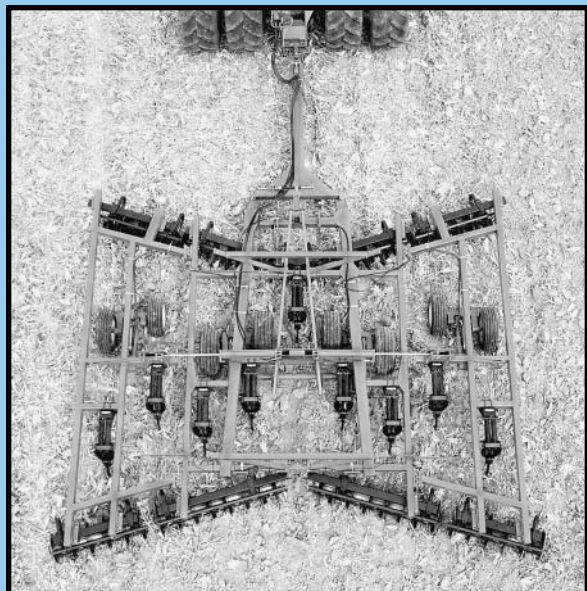
Independent heads supporting two row units each are mounted on the tool bar and configured to match any planting pattern. A digital operator interface permits on-the-go sensitivity adjustment for improved crop following. Automatic prefold head positioning and hydraulic fold actuation for rapid tool bar transport positioning is unique to the TasselStalker. Cutter to puller changeover uses quick-change hydraulics and no tools.

OXBO International Corp.

Byron, New York, USA; 716-548-2665



● Tillage tool's new features make operation smoother and more efficient



The 512 Disk Ripper is a combination primary tillage tool that cuts and sizes residue, shatters sub-soil compaction, tills and mixes soil, and leaves a level soil profile in a single pass. Ripper standards positioned behind front gangs and ahead of wheels provide smoother operation in the field. Parabolic cushion trip standards break-up subsoil compaction and protect against rocks. This 22-foot, 6-inch (6.9-meter) nine standard flexible fold 512 Disk Ripper increases the field efficiency of higher horsepower tractors on today's market.

John Deere Des Moines Works
Des Moines, Iowa, USA; 515-289-3093

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● Wider can be better when it comes to round balers

Hesston Models 845, 855, and 856 Round balers with mesh wrap and Case Models RS451, RS551 and RS561 Round Balers with mesh wrap are a family of variable chamber round balers. Wide pickup for dry hay eliminates the need for auxiliary gathering wheels and does a cleaner job of picking up the windrow. Wide pickup also enhances packing of bale sides to provide solid, square-shouldered, round bales. An Advanced mesh wrap system is wider than the bale chamber to cover bale edges. A simple console makes the baler easy to operate in all crop conditions.

Hay & Forage Industries
Hesston, Kansas, USA; 316-327-6603



● Crawler tractor provides stability and control in the vineyard



The GK TR4 Vineyard Tracker is a self-propelled, hydrostatically driven, multi-purpose, over-the-row crawler tractor with on-the-go track width adjustment from 96 to 136 inches (244 to 345 centimeters). It also features height adjustment from 76 to 86 inches (193 to 218 centimeters) with auto or manual self-leveling. Powered by a 125 horsepower turbo diesel engine, it carries 200-gallon (760-liter) stainless saddle tanks and a quick-attach 50-foot air blast spray system. Front mounted CAT II implement hitches and a 65-horsepower hydraulic power take-off with load sensing allows the TR4 to operate a variety of vineyard implements such as hedgers, pruners and mowers on multiple rows at once.

GK Machine Inc.

Donald, Oregon, USA; 503-678-5525

AE50 OUTSTANDING



INNOVATIONS 2000

● Falcon II controls application rates for up to nine products

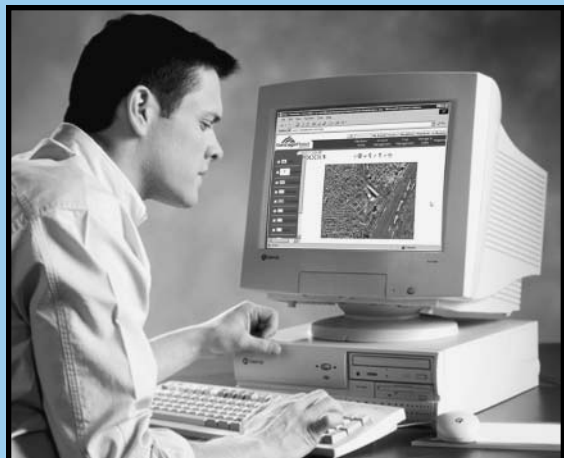
The Falcon II is a multi-loop controller for multiple product application rates. This controller simultaneously uses multiple maps. It is based on an environmentally hardened Pentium computer and uses a network system to control output and receive feedback. The unit is currently used on Ag-Chem Equipment Co. Inc. vehicles to apply chemicals and fertilizers to agricultural land. These vehicles can apply and independently control application rates for up to nine products. The Falcon II uses either an Echelon network or a J1939 CAN network and has been improved from Ag-Chem's earlier Falcon system.

Ag-Chem Equipment Co. Inc.

Minnetonka, Minnesota, USA; 612-933-9006



● Web service connects producers and consultants who share information



VantagePoint Network® is a Web site for producers and management professionals such as agronomic consultants and marketing advisors to communicate and collaborate in tracing the identity of a crop throughout the growing process. The record keeping data base hosts extensive reference data on chemical and fertilizer products and provides a platform to upload and manage geo-spatial data on soil nutrients and yields. In the marketplace, producers can extend information to commodity purchasers on such uses as GMO or organic crop production.

VantagePoint Network

Fort Collins, Colorado, USA; 970-266-4624

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INNOVATIONS 2000

● STS combines offer material handling, threshing and separation advantages

The John Deere 9650 STS and 9750 STS — single tine separator — combines advance separating technology with design features that overcome feeding and material handling problems often associated with conventional rotary combines. The 250- and 300-bushel units rely on swept tines in a three stage non-concentric housing to penetrate, comb, pull and release the crop mat. The single tine separator system offers advantages in material handling, threshing, separation and grain saving for large and small crops, especially in green stem, weedy or high moisture conditions.

John Deere Harvester Works

East Moline, Illinois, USA; 309-765-2017

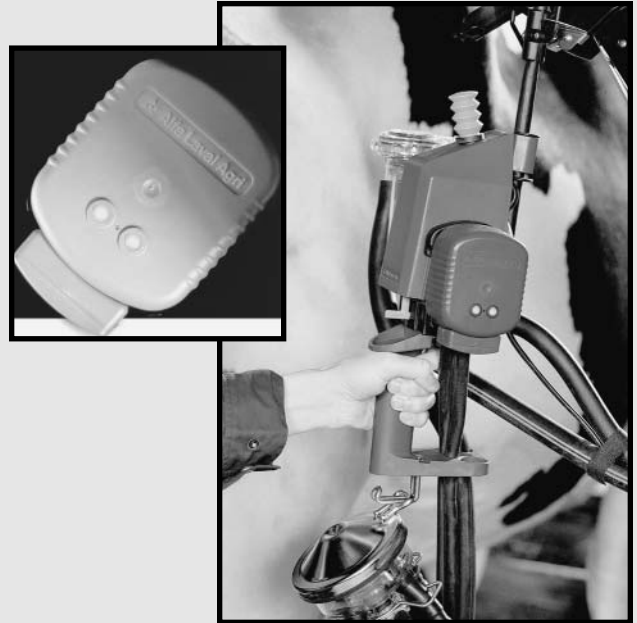


● Programmable software customizes EP 70 for milking animals besides cows

The EP 70 is an electronic pulsator with a patented valve design. With its motor-driven rotational valves instead of solenoid valves the pulsator uses less electrical current. Driven by mains or battery power, the EP 70 delivers individual alternating pulsation to the cluster. A rechargeable battery option enables free use in stanchion barns or bucket milking plants. Programmable software can customize settings and is flexible enough for milking animals other than cows. The randomized staggering start feature improves vacuum stability in the milking system. The simplified design with fewer parts reduces service time 70 percent.

DeLaval AB

Tumba, Sweden, 4-685-306-6000



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INNOVATIONS 2000

● Windrower's rototilling action breaks up lumps and levels ground

The Schulte SRW1400 Pivoting Rock Windrower windrows small to medium rocks, roots, stumps and debris from land clearing operations into uniform rows for easier pickup. The unit's rototilling action breaks up lumps and levels the ground. A patented floating drum arrangement allows the wheels to be closer to the drum. The windrower can be pivoted from a 14-foot (4.27-meter) working width to a 93-inch (2.360-meter) transport width. This allows the windrower to meet transport width regulations in North America and Europe without obtaining a permit.

Schulte Industries Ltd.

Englefeld, Saskatchewan, Canada; 306-287-3715



● Metering system provides precise seed placement



The Case IH Cyclo Air[®] Meter attachment is compatible with Concord air till drills and air systems to allow growers to add row crops to cereal grain rotations. The metering system meters and plants coarse grains such as corn, milo, sunflowers and soybeans. This system also allows growers to apply fertilizer at the time of planting. A hydraulic Cyclo Air meter drive ensures smooth rotation of the drum for precise seed placement. The Early Riser[®] monitor allows the grower to adjust seed rates on the go. A hydraulically driven fan pressurizes each rotating drum while each Cyclo Air module singles out each seed for precise seed spacing, handling up to eight rows.

Case IH Concord

Fargo, North Dakota, USA; 701-280-1260

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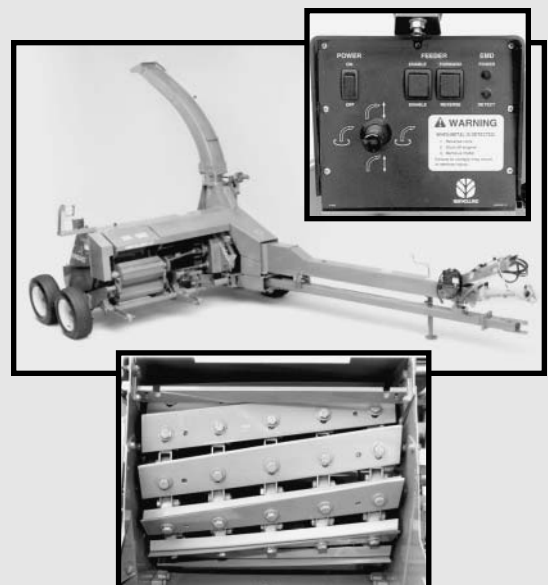
INNOVATIONS 2000

● Cutting performance maintained with built-in knife sharpener

The New Holland FP240 Pull-Type Forage Harvester provides capacity and chop quality for harvesting forage crops. To maintain cutting performance, the unit has a built-in knife sharpener plus hardened and reversible shear bars. The harvester was designed to use with the optional New Holland CropPro[®] on-board crop processor. A Metalert[®] III electronic metal detector is also available as an option to protect the cutter head and livestock. Three new crop heads available.

New Holland North America

New Holland, Pennsylvania, USA; 717-355-3663



● Cleaning equipment is maneuverable and easy to transport



The Gallenberg BeachMaster™ Walk Behind beach cleaner removes debris and rock from small sandy areas. Its size makes the machine maneuverable and easy to transport. A patent pending sweeping process can skim the sand surface, protecting fragile ecosystems, or dig up to 5 inches (13 centimeters) deep. The machine picks up debris from cigarette butt size to 2-inch (5-centimeter) × 4-inch (13-centimeter) boards up to 12 inches (30.5 centimeters) long. It is used on beaches and volleyball courts or for landscaping, contracting and grounds maintenance.

Gallenberg Equipment Inc.
Antigo, Wisconsin, USA; 715-623-3754

AE50 OUTSTANDING



INNOVATIONS 2000

● Peanut yield maps become profit maps with the PYM®

The Peanut Yield Monitor — PYM® measures spatial yield variability in a peanut field and can be installed on any new or existing peanut combine. Instantaneous yield data, cumulative load, harvested area, geographic location and speed are all updated once per second and presented on an LCD push-button interface. The data can be used to create peanut yield maps that provide a color-coded visual image showing the variability of yield across a field. Yield maps can be converted to profit maps by subtracting the per acre production cost from the per acre return. The profit map shows the net profit or loss associated with each area within a field.

WAG Corp.
Tupelo, Missouri, USA; 601-844-8478



● Reduced emission diesel engine powers new equipment



The Hesston Model 8550 self-propelled windrower tractor with Model 8070 Rotary Disc Cut Hay Header and Case Model 8880 self-propelled windrower tractor with Model 725 Rotary Disc Cut Hay Header use a 152-horsepower reduced emission diesel engine, hydrostatic ground and hydrostatic header drive. Large tires improve ride quality and minimize compaction. A wide curved windshield and full length side glass enhance operator visibility while a seat-mounted control panel allows for convenient machine control. A simplified drive system reduces the number of gear boxes and drive components for increased reliability.

Hay & Forage Industries
Hesston, Kansas, USA; 316-327-6603

AE50 OUTSTANDING



INNOVATIONS 2000

● Suspended tandem axle offers better road ride and flotation in the field

The New Holland BB940 and BB960 Big Balers make tight, dense bales of forage crops ranging from dry hay and straw to high-moisture silage. The optional CropCutter™ system chops plants for denser bales and easier use for feed and bedding. A suspended tandem axle is available for better road ride and flotation in the field to increase comfort and daily capacity while reducing soil compaction. Another feature is the enclosed gearbox drive line to the stuffer and knotters, which replaces higher-maintenance open gears or chain drives of conventional big balers.

New Holland North America
New Holland, Pennsylvania, USA; 717-355-3663



● The John Deere 4700 compact utility tractor makes its debut



John Deere Compact Utility Tractors offer large tractor features in a compact machine. The 40-horsepower 4700 is available with a standard gear transmission and an optional Twin Touch™ pedal servo-actuated hydrostatic transmission. Planetary final drives, differential lock and electro-hydraulically actuated independent power take-off are standard equipment. The 4700 provides the operator with a high power density, maneuverability and the ability to attach to more than 40 implements. The loader and backhoe can be attached and detached without tools in less than five minutes.

John Deere Commercial Products
Grovetown, Georgia, USA; 706-868-4040

AE50 OUTSTANDING



INNOVATIONS 2000

● 3104 Terra-Gator® “dog walks” in the field

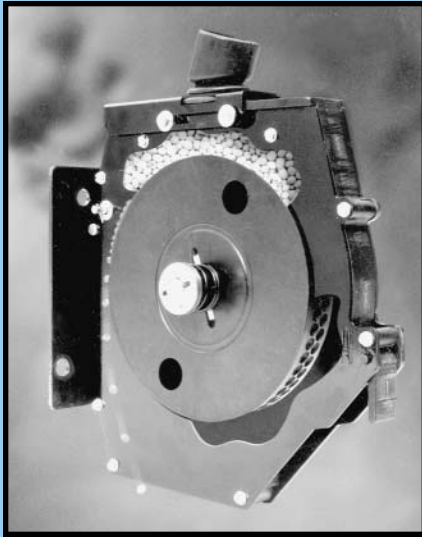


The 3104 Terra-Gator® is a self-propelled, articulated vehicle typically used as an agricultural sludge applicator. Its chassis is also used outside the agricultural industry such as for gas and oil exploration. The new Terra-Gator's John Deere/Funk 11-speed transmission shifts under full power. The machine's chassis, at the push of a button, “dog walks” during field operation. That means the rear axle pivots to allow the rear tires to travel in a different track than the front tires, which reduces soil compaction. The chassis is equipped with a variable rate sludge system.

Ag-Chem Equipment Co. Inc.
Minnetonka, Minnesota, USA; 612-933-9006



● Meter ensures consistent spacing in the furrow



The Great Plains Manufacturing Singulator Plus is a meter that singulates seed such as soybeans, milo, corn and cotton, and volumetrically meters seeds such as wheat and rice. With a quick change of the meter wheel, a producer can plant a variety of seeds at an accurate rate. Because the meter is mounted atop the double disk row opener and the seed drop distance is minimized, it ensures more consistent seed spacing in the furrow. The thin meter profile allows for row spacings as narrow as 7.5 inches (19 centimeters). The meter also has provisions for cutting off seed flow.

Great Plains Manufacturing
Salina, Kansas, USA; 785-823-3276

AE50 OUTSTANDING



INNOVATIONS 2000

● Steerable drive front axle improves 8144 Terra-Gator®

The 8144 Terra-Gator® is the first 4WD, high flotation, self-propelled agricultural sprayer and spreader. Although Terra-Gators have been on the market about 30 years, this model has added a FABCO steerable drive front axle. The machine can be driven in 2WD or 4WD with the flip of a switch that controls the transmission disconnect. The cab has all electronic controls and gauges, and is certified to California Environmental Protection Agency filtration standards. The cab's glass expanse provides a 360-degree view. The 8144 can be equipped with a liquid or dry fertilizer system.

Ag-Chem Equipment Co. Inc.
Minnetonka, Minnesota, USA; 612-933-9006



● Disc mower conditioner technology provides faster dry down



The New Holland 1441 and 1442 Discbine Disc Mower-Conditioners provide Discbine disc-cutting technology with rubber-roll or flail conditioning in a maneuverable, high-capacity machine. The units feature a 12-disc modular cutter bar that cuts at 15 feet, 7 inches (468 centimeters) wide. The 1441 uses New Holland's chevron-design, which intermeshes rubber rolls for gentle crop handling and fast dry down. The 1442's tapered flails pick up cut crop behind the cutter bar where the crop rubs together and against the conditioning hood to remove the waxy layer from stems for faster dry down.

New Holland North America
New Holland, Pennsylvania, USA; 717-355-3663

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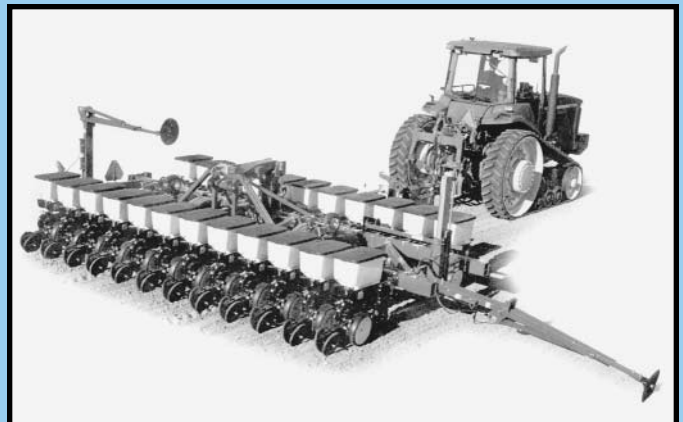


INNOVATIONS 2000

● Hydraulic weight transfer system ensures adequate row unit penetration

The model 3400 planter from Kinze Manufacturing Inc. is available in 12-row, 20-inch (51 centimeter); 23-row, 10-inch (25-centimeter); 12-row, 22-inch (56-centimeter); and 23-row, 11-inch (28-centimeter) configurations. Its double frame construction, parallel lift arm mechanism and rotate-to-transport design offer a planter that achieves ultra narrow row spacings. Standard equipment includes Kinze Evolution Series row units, dual radial rib implement tires, contact unit drive tires and an end mounted seed rate transmission. A high flotation tire package is also available. A hydraulic weight transfer system applies the machine's overall weight to the tool bar to ensure row unit penetration.

Kinze Manufacturing Inc.
Williamsburg, Iowa, USA; 319-668-1300



● Focus groups, surveys and on-farm research led to track tractor design



The 9000T track-type agricultural tractors mark John Deere's entry into the high horsepower, track tractor market. The 360 HP 9300T and the 425 HP 9400T were designed with input from customers through focus groups, surveys and on-farm research. The tractors are constructed to work light in the spring and heavy in the fall, handle steep hillsides and turn under load. Incorporating many features of the 9000 series of wheeled tractors the 9000T adds track vehicle advantages such as wide stance, long wheel base, controllability, power and versatility.

John Deere PEC
Waterloo, Iowa, USA; 319-292-8056

AE50 OUTSTANDING

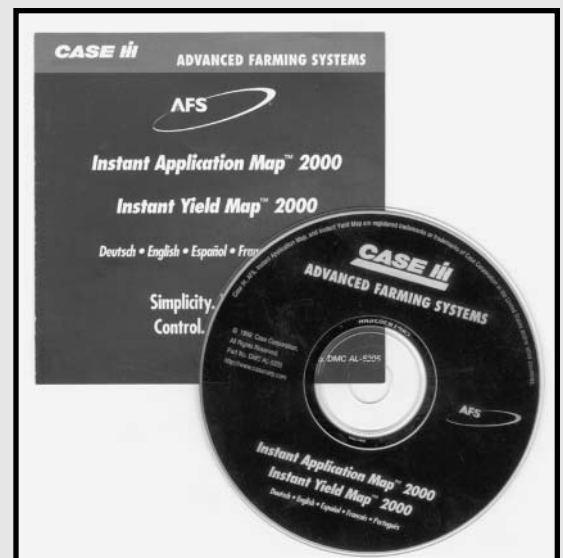


INNOVATIONS 2000

● New application software available in five languages

Instant Application Map™ 2000 software is a new component of AFS 2000, the latest Case IH Advanced Farming Systems software suite. Instant Application Map 2000 allows users to create input rate prescriptions for variable-rated seed and fertilizer applications. Instant Application Map 2000 uses wizards to guide novice users through creating prescriptions, exporting and importing data to PC cards and mapping application rate data. It has an expert mode for conventional multi-layer mapping of site-specific farming data and enables users to track spatial data using the same database as Instant Yield Map™ 2000 software. Instant Application Map 2000 is available in English, French, German, Portuguese and Spanish.

Case Corp.
Racine, Wisconsin, USA; 630-789-7103



● Boom system allows operators to spot spray in one pass

The Summers Ultimate Super sprayer is a hydraulic folding suspended boom pull type sprayer available in boom sizes from 60 to 90 feet (1,800 to 2,700 centimeters). Functions controlled from the operator platform are left tip lift, right tip lift, vertical height, outer boom fold and inner boom fold. A piston accumulator provides cushioning for the vertical height cylinders allowing the booms to float over rough terrain. Outer booms have a hydraulically dampened break away system that allows boom to break away upon contact with an obstruction, then self return after clearing the obstacle.

Summers Manufacturing
Maddock, North Dakota, USA; 701-438-2855



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● Smaller baling equipment means lower costs or hay producers



The Vermeer Rebel 5400 is a smaller sized round baler with fewer options than larger more complex models. The Rebel 5400 allows hay producers to do their own round baling rather than outsource the work. The 5400 has fewer moving parts, which makes service easier and requires less horsepower so it can be used with smaller tractors. It also has fewer options, which translates to lower cost. Hay producers unable to purchase new balers in the past can afford a Rebel 5400 and benefit from new machine warranty and reliability.

Vermeer Manufacturing Company
Pella, Iowa, USA; 800-370-3659

● Labor and material costs reduced by the 1240 Bark Blower

The 1240 Bark Blower offers self-powered, mobile, pneumatic conveyors that transport wood mulches, saw dust, compost and other bulk materials containing high concentrations of long fibers. The units can move more than 40 cubic yards (30 cubic meters) of bulk material per hour through a 4- or 5-inch (10- or 13-centimeter) distribution hose up to 300 feet (9,000 centimeters) long. The unit mounts on a truck chassis or trailer. Applications range from landscape bark mulch projects to compost spreading and highway roadside mulch cover. Improved production rates save labor and material costs compared to conventional rake and wheel barrel operations.

Finn Corp.

Fairfield, Ohio, USA; 513-874-2818



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INNOVATIONS 2000

● New design puts clean grain on top without pushing it through the pile



The turret system for the bubble-up auger on the New Holland TR™99 Twin Rotor® Combine allows operators to deliver clean grain to the highest point in the grain tank without pushing it up through existing grain. This method saves in power demand and wear and tear on combine augers and drives. It also protects grain from damage in the tank. The turret design enables operators to reposition the top of the auger for transport or storage without tools. The auger's central position fills the tank evenly on all sides without leveling augers. A manual rotation system is standard on all TR99 combines.

New Holland North America

New Holland, Pennsylvania, USA; 717-355-3663

● K-Series electrostatic sprayers improve atomization and penetration

A new three-point-hitch mounted sprayer uses induction charging nozzles and a power take-off driven rotary air compressor system. The K 450-Series is available in several sizes with induction charging nozzles. Electrically charged spray droplets increase spray deposition onto plant surfaces threefold. The new electrostatic nozzles and rotary compressor system improve reliability. The K-Series also provides increased spray charging levels and energy for spray atomization and penetration into dense crop canopies. Benefits include improvements in spray deposition efficiency and improved insect and disease control efficacy with 40 to 60 percent pesticide reduction.

Electrostatic Spraying Systems Inc.
Watkinsville, Georgia, USA; 706-769-0025



AE50 OUTSTANDING



INNOVATIONS 2000

● Yield monitoring system keeps tabs on harvest operations



The 2000 Case IH AFS Yield Monitor System is comprised of the AFS Universal Display or Universal Display Plus, AFS Universal Receiver, grain flow sensor, moisture sensor and bypass unit, Yield Monitor Interface Unit and AFS Instant Yield Map 2000 desktop software. Displays allow users to monitor harvest operations and adjust inputs for calculating yield, marking areas on field maps for analysis, performing data management tasks and calibrating the system. Users can create yield, moisture and elevation maps, and calibrate the yield monitor on a desktop computer.

Case Corp. Burr Ridge Technical Center
Burr Ridge, Illinois, USA; 630-887-3791

● Heavy-duty SDX30 cuts through debris for high-speed operation

The Case IH SDX30 Single Disk No-till Air Drill is a low disturbance, single-disk-planting tool that allows farmers to penetrate soil in high-residue conditions. The SDX30 has a 30-foot (900-centimeter) working width and heavy-duty frame members to provide strength and weight for high-speed operation and maximum productivity. The drill has flexible rank down pressure adjustments for varied depth applications. The SDX30 opener uses a 22.5-inch (57-centimeter) diameter disk to cut through heavy debris. It also offers uniform down pressure adjustments from 250 to 510 pounds (112 to 229 kilograms) on each opener, while maintaining seeding depths from 0 to 3.5 inches (0 to 9 centimeters) in 0.25-inch (0.6-centimeter) increments.

Case IH Concord

Fargo, North Dakota, USA; 701-298-5961



AE50 OUTSTANDING



INNOVATIONS 2000

● Kinze introduces Evolution Series Row Unit



The Kinze Evolution Series Row Unit offers a variety of new features. Load-equalizing gauge wheels integrated with a new, easy-to-use depth adjustment ensure consistent seed placement in heavy residue and rough planting conditions. A shortened hopper support allows easier access for adjustments and maintenance, and a larger, precision molded seed hopper increases planting time between refills. A self-aligning, twist release drive clutch allows disengagement of an individual row and quick seed hopper removal.

Kinze Manufacturing Inc.

Williamsburg, Iowa, USA; 319-668-1300

● Rainfall, soil temperature and moisture measured by WatchDog™



WatchDog data logger technology is a versatile, affordable mini-weather station. Each WatchDog recorder has a user-replaceable battery and a clock for data date and time. Three logger models are available with two channels and two models with four channels or sensors. Measurement capacity varies with the model. Available external sensors include rainfall, external soil temperature, leaf wetness, soil moisture and quantum light. SpecWare software configures the logger's sensors, deploys the logger for recording and presents data in various forms and reports.

Spectrum Technologies Inc.
Plainfield, Illinois, USA; 800-248-8873

AE50 OUTSTANDING



INNOVATIONS 2000

● Titan Tool bar can be equipped with liquid fertilizer tanks

The Titan Tool bar is a large-scale planter frame that operates as a three-point mounted implement in the field position and as a pull type implement during transport. It has an operating width exceeding 50 feet (1,500 centimeters) and a transport width of less than 15 feet (450 centimeters). In the operating position, visibility and maneuverability are optimized and the weight transferred to the tractor improves performance in soft or wet conditions. The Titan Bar can also be equipped with liquid fertilizer tanks. The in-cab controller manages all tool bar functions. Messages prompt the operator during the folding and unfolding sequence, which eliminates confusion and guesswork.

Orthman Manufacturing Inc.
Lexington, Nebraska, USA; 800-658-3270



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