

**AGRICULTURAL RESOURCE
MANAGEMENT SURVEY
ORGANIC APPLE
PRODUCTION PRACTICES and
COSTS REPORT
for 2007**

RESPONDENT BOOKLET

Section A, item 1c & Section B, item 7

**APPLE
VARIETY CODES**

Braeburn.	067	Idared.	269	Red Delicious.	464
Cortland.	117	Jonagold.	281	Rome.	503
Empire.	164	Jonathan/Philip Ric.	285	Spartan.	557
Fuji.	189	McIntosh.	350	Stayman/Stayman Winesap. . .	574
Gala.	193	Mutsu/Crispin.	125	Winesap.	666
Golden Delicious.	212	Newtown Pippin/ Yellow Newtown.	381	York/York Imperial.	681
Granny Smith.	226	Northern Spy/Red Spy/ Red Northern Spy.	387	Other.	999
Heirloom.	998	Pink Lady.	423		

Section B, item 9

ROOTSTOCKS

- 1 **Standard** – large full-sized trees that may grow more than 25 feet tall.
- 2 **Dwarf** – trees planted on dwarf rootstocks will grow 10 to 12 feet tall.
- 3 **Semi-dwarf** – trees planted on semi-dwarf rootstocks will reach a height of 15 to 20 feet.
- 4 **Other** – trees planted on rootstocks other than the sizes above.

Section B, item 10

ORCHARD FLOOR MANAGEMENT SYSTEM

- 1 **Grass Alleys** (between tree rows with vegetation-free strips in the tree row)
- 2 **Vegetative Cover** (Solid)
- 3 **Clear Cultivation** (Either by cultivation or herbicides)
- 4 **Mulches** (In the tree row)
- 5 **Other**

Section B, item 11
**REASON FOR CHOOSING
ORGANIC PRODUCTION SYSTEM**

- 1 Protect health of family and community?
- 2 Adopt more environmentally friendly practices?
- 3 Increase farm Income?
- 4 For some other reason? [*Specify:*_____]

Section B, item 25a
**FEDERAL CROP
INSURANCE COVERAGE**

- 1 **Basic Catastrophic Insurance** (*Federal CAT*) bought for a flat fee and protects against crop loss greater than 50% of average yield, at 55% of the price.
- 2 **Buy-up Above Basic Federal CAT** for higher levels of yield and price protection (*such as 65% of yield and 100% Price, multi peril crop insurance*).
- 3 **Revenue Insurance** include Income Protection (IP), Crop Revenue Coverage (CRC), and Revenue Assurance (RA).
- 4 **Organic Plan Insurance** includes:
 - 1) certified organic acreage,
 - 2) transitional acreage being converted to certified organic, and
 - 3) buffer zone acreage.
- 5 **Other Federal Crop Insurance** (*Group Risk Plan, Adjusted Gross Revenue, Group Risk Income Protection, etc.*).

Section C, Column 6 & Section D, Column 9

**FERTILIZER/PESTICIDE
APPLICATION METHODS**

- 1 Broadcast, Ground without incorporation
- 2 Broadcast, Ground with incorporation
- 3 Broadcast, by aircraft
- 5 In irrigation water
- 6 Chisel/injected or knifed in
- 7 Banded/sidedressed
- 8 Foliar or directed spray
- 9 Spot treatments (***Section D only***)
- 10 Air Blast

Section C, item 4

Common Fertilizers and Their Percent Analysis

[Enumerator Note: *If Respondent cannot report the formulation for Section C, column 7, use the formulations below.*]

Name	Form	Percent Active Ingredients			
		N	P ₂ O ₅	K ₂ O	S
Ammonia	D/L	80	---	---	---
Ammoniated superphosphate.	D	12-17	22-35	---	---
Ammonium metaphosphate.	D	12	51	---	---
Ammonium nitrate.	D	32-34	---	---	---
Ammonium phosphate.	D	11-18	46-48	---	---
Ammonium phosphate nitrate.	D	27-30	10-15	---	---
Ammonium phosphate sulfate (APS).	D	13-16	20	---	15
Ammonium polyphosphate (APP).	L	10-11	34-37	---	---
Ammonium polysulfide (Ammonium Sulfate).	L	20-21	---	---	24
Ammonium sulfate nitrate.	D	20-30	---	---	5
Ammonium thiosulfate solution.	L	12	---	---	26
Anhydrous ammonia.	L/G	82	---	---	---
Aqua ammonia (Ammonium Hydroxide).	L	16-25	---	---	---
Bone meal.	D	0-2	10-20	---	---
Calcium ammonium nitrate.	D	15-16	---	---	---
Diammonium phosphate sulfur.	D	15-16	39-41	---	---
Diammonium phosphate (DAP).	D	16-21	46-53	---	---
Elemental sulfur.	D	---	---	---	52-100
Greensand.	D	---	1	6	---
Magnesium sulfate.	D	---	---	---	13
Mixed fertilizer.	D	2	6	12	---
		3	9	18	---
		3	10	30	---
		5	10	15	---
		5	10	30	---
		5	15	30	---
		8	24	24	---
		9	18	9	---
		10	34	---	---
Monoammonium phosphate (MAP).	D	11-13	48-62	---	---
Naturalene	D/L	40	---	---	---
Nitrogen solutions.	L	7-58	---	---	---
Nitric phosphate.	D	12-17	22-35	---	---
Phosphate rock.	D	---	2-35	---	---
Phosphoric acid.	L	---	2-76	---	---
Potassium carbonate.	D	---	---	34-48	---
Potassium chloride (Muriate of potash).	D	---	---	60-62	---
Potassium magnesium sulfate.	D	---	---	22	23
Potassium metaphosphate.	D	---	55-57	37-38	---
Potassium nitrate.	D	13	---	44	---
Potassium orthophosphate.	D	---	30-60	30-50	---
Potassium polyphosphate.	L	---	40-60	22-48	---
Potassium sodium nitrate.	D	15	---	14-15	---
Potassium solutions.	L	---	---	13-15	---
Potassium sulfate.	D	---	---	50-53	16
Sodium nitrate (Nitrate of Soda).	D	15-16	---	---	---
Sulfuric acid.	L	---	---	---	20-26
Super phosphate (22% & under).	D	---	16-22	---	11
Super phosphate (over 22%).	D	---	23-39	---	11
Triple super phosphate.	D	---	40-54	---	11
Urea.	D	45-46	---	---	---
Urea, sulfur coated.	D	36-38	---	---	13-16
Urea ammonium phosphate.	D	25-58	28-35	---	---
Urea ammonium nitrate (UAN).	L	28-32	---	---	---
Urea phosphate.	D	17	44	---	---

CHEMICALS and PESTICIDES for Organic Apple, All

F = Fungicide; H = Herbicide; I = Insecticide; M = Misc. Other; MD = Defoliant/Dessicant; MG = Growth Regulator
AS = Aqueous Suspension, D = Dust, DF = Dry flowable, DG = Water-Dispersible Granules, E or EC = Emulsifiable Concentrate,
ES = Emulsifiable solution, F or L = Flowable, G or GR = Granular, L = Liquid, LV = Low volatility, M or ME = Microencapsulated,
P = Pellets, S = Solution, SC = Soluble Concentrate, SL = Slurry, SP = Soluble powder, W or WP = Wettable powder,
WDG or WG = Water-Dispersible Granules, WSP = Water-soluble packet

D/L	Class	Code	Product Name	D/L	Class	Code	Product Name
D	I	1672	Able	L	MG	9481	Isomate-C Plus
L	MG	9177	Accel PGR	L	MG	9401	Isomate-C TT
D	I	1355	Agree WG	L	M	9312	Isomate-M 100
L	MG	9095	Alphaspra 200	L	M	9373	Isomate-OBLR Plus
D	MG	9065	Amid-Thin W	D	M	9311	Isomate-P Pheromone
D	MG	9365	Apogee PGR	D	F	7327	Kaligreen (WP)
L	I	2022	Azatrol EC	D	I	1671	Lepinox WDG
D	F	7206	Basic Copper 53	L	F	7145	Lime Sulfur Solution
D	I	1812	Biobit HP	L	MG	9142	Liqui-Stik Concentrate
L	I	1783	BioCover MLT	L	I	1322	M-Pede
D	F	7541	BlightBan A506	L	I	1426	Margosan-O
L	MG	9053	Carbaryl 4L	L	MG	9423	Maxcel
D	M	9214	Checkmate CM	L	H	3072	Matran EC
L	I	1282	Condor	D	F	7531	Microfine Sulfur
D	F	7517	Contans WG	D	F	7403	Microperse Wettable Sulfur
D	I	1477	Crymax	D	F	7629	Micro Sulf Micronized Wettable Sulfur
L	H	4654	Cyclone Concentrate	D	F	7544	MilStop Broad Spectrum Foliar
L	I	1180	CYD-X	D	F	7139	Mycoshield (WP)
L	MG	9081	Cytokin Bioregulator Concentrate	D	F	7283	Mycostop Biofungicide
D	I	1865	Deliver	L	MG	9082	NAA-200
D	I	1023	Dipel 2X (WP)	L	MG	9072	NAA-800
D	I	1516	Dipel DF	D	MG	9179	NAA 2% WP
D	F	7055	Dithane M-22 Special (80WP)	L	H	3073	Nature's Avenger Organic Concentrate
D	I	1900	Entrust	L	I	2116	Neemazad
L	MG	9208	Ethephon 2	L	I	1551	Neemix 4.5
L	MG	9004	Ethrel Plant Regulator (2EC)	L	I	1550	Neeix Botanical Insectice
L	MG	9395	Exilis Plus	D	I	1518	Nexter
L	MG	9404	Fascination Plant Growth Regulator	D	M	9368	NoMate CM Spiral
L	MG	9066	Fruit Fix 200	L	F	7300	Nu-Cop 3L
L	MG	9033	Fruit Fix 800	D	F	7309	Nu-Cop 50DF
L	MG	9067	Fruit Fix Concentrate 800	D	F	7658	Nu-Cop 50WP
D	MG	9071	Fruitone-N	L	I	1547	Nufos 4E
D	M	9181	Fumitoxin Tablets (55%)	L	I	1292	Omni Supreme Spray
L	I	1555	Gamstar LC	L	I	1222	Organic JMS Stylet-Oil
L	M	9266	Garlic Barrier AG	L	MG	9316	Perlan PGR
L	I	1942	GF-120 NF Naturalyte Fruit Fly Bait	L	MG	9050	Promalin PGR
L	MG	9088	GibGro 4LS	L	I	1561	ProNatural All Season Spray Oil
D	MG	9211	GibGro 5% Powder	L	MG	9051	ProVide Plant Growth Regulator
D	I	1161	Gnatrol	L	I	1957	PyGanic EC 1.4 II
L	MD	9399	Gramoxone Max	L	I	1958	PyGanic EC 5.0 II
L	F	7659	HDH Peroxy				

D/L	Class	Code	Product Name
L	MD	9425	Rely Herbicide (aka Ignite 1SC)
D	MG	9218	ReTain
D	F	7604	RootShield Granules
L	MD	9172	Roundup Original
L	MD	9281	Roundup Ultra
D	MR	9087	Rozol (Pellets)
L	MG	9006	RyzUp
D	F	7484	Serenade Biofungicide (WP)
L	MG	9058	Sevin 4F
D	MG	9061	Sevin 80S
L	MG	9062	Sevin XLR Plus
D	F	7263	SoilGard 12G
L	F	7569	Sonata AS
L	F	7657	Sporan EC

D/L	Class	Code	Product Name
L	MG	9398	Stimplex
D	MR	9086	Strychnine Bait (.5%)
L	I	1454	Superneem 4.5-B
D	F	7605	T-22 HC
D	F	7481	T-22 Planter Box Biofungicide
D	I	1131	Vendex 50WP
L	I	1867	Virosoft Bioinsecticide
L	H	4004	Weedar 64A
L	I	2088	Wisdom Flowable
D	I	1685	XenTari Biological
D	I	1377	XenTari WDG
D	F	7561	Yellow Jacket Special Dusting Sulfur
D	I	1967	Zeal Miticide
D	MR	9063	Zinc Phosphide Oat Bait

Conversion Factors for Liquid and Dry Products

Liquid Products

1 Gallon = 4 Quarts

1 Gallon = 3.785 Liters

1 Gallon = 8 Pints

1 Gallon = 128 Ounces

1 Quart = 2 Pints

1 Pint = 16 Fluid Ounces

2 Cups = 1 Pint

Dry Products

1 Pound = 16 Dry Ounces

1 Ounce = 28.3 Grams

1 Ounce = .0625 Pounds

1 Pound = 453 Grams

1 Kilogram = 1,000 Grams

1 Kilogram = 2.2046 Pounds

PEST MANAGEMENT INFORMATION SOURCES

Section E, item 25.

- 1 County, Cooperative, or University Extension Advisor, Publications or Demonstrations
- 2 Farm Supply or Chemical Dealer
- 3 Commercial Scouting Service
- 4 Independent Crop Consultant or Pest Control Advisor/Custom Applicator
- 5 Other Growers or Producers
- 6 Producer Associations, Newsletters or Trade Magazines
- 7 Electronic Information Services (*DTN, Internet, World Wide Web, etc.*)
- 8 Employee Pest Advisor
- 9 Packinghouse or warehouse consultant
- 10 Product lists of approved organic products (OMRI, WSDA, etc.)
- 11 Other – (Specify: _____)
- 12 None – Operator used no **outside** information source

Section F, item 1,
columns 3 & 4

MACHINERY and IMPLEMENT CODES

PLOWS and DISKS

- 01 Chisel Plow (Big Ox)
- 02 Coulter Plow
(Coulter Chisel, Soil Saver, Soil Conservor)
- 03 Deep Ripper
(Knife, Bed knife, Slide)
- 04 Disk Plow
- Moldboard**
- 05 Regular
- 06 Two Way
- 07 Stubble-mulch
(Noble, Sweeps, Hoeme Plow, Muckeroy Plow)
- 08 Subsoiler
(Chisel, Ripper, V-ripper)
- 09 Disk-chisel
(Mulch Tiller)
- Offset Disk**
- 10 Heavy Disk
- 11 Light Disk
- 12 One-way Disk
(Disk Tiller)
- 13 Single Disk
- Tandem Disk**
- 14 Plowing
- 15 Regular
- 16 Paraplow

MISCELLANEOUS TILLAGE

- 61 Land-all, Do-all, Mix-n-till, Till-all
(Disk, Shovels, Reel & Spikes)
- 62 Mulch Treader, Picker,
Treader, Skew
- 63 Roto-tiller
- 64 Roterra (Roto-spike, Lely)
- 65 Sand-fighter
- 66 Soil Finisher
(Finishing Tool, Mulch Finisher
Tri-tiller, Task Master)
- 67 Root Crown Puller
- 68 Stalk Puller/Chopper

HARROWS (DRAGS)

- 30 Heavy Harrow
- 31 Field Conditioner
(Scratcher,
Seed Bed Conditioner,
Soil Conditioner,
Ground Hog)
- 32 Finishing
(Harrogator, Spiral, Roller,
Knives, Shanks, Pegs,
Smoother)
- 33 Flex-tine Tooth
(Coil Tine)
- 34 Multi-weeder
(Cultivator & Harrow)
- 35 Rail, Pipe, Log, Plank
- 36 Rod Weeder
- 37 Roller (Culti-mulcher,
Pulvi-mulcher, Crumbler,
Packer-mulcher,
Packer & Shanks)
- 38 Spike Tooth
- 39 Spring Tooth
- 40 Powered Spike Tooth Harrow

BEDDERS-SHAPERS

- 41 Bedder (Shaper)
(Bedshaper, Crowder)
- 42 Bed Shaper
- Disk**
- 43 Hipper
- 44 Row
- 45 Float
- 46 Lister (Middle-buster)
- 47 Rorovator-bedder
- 48 Seedbed Roller
(Flat Roller)
- 49 Sub-soil Bedder
(Ripper-hipper)
- 50 Discovator

PACKERS

- 51 Culti-packer
(Pulverizer, Crow-foot,
Serrated, Ring, Spiral)

Roller-packer

- 52 Attachment
- 53 Smooth & Flat

CULTIVATORS

- 21 Field Cultivator
(Regular Digger,
Triple K, Danish Tined,
Swedish Tined,
Incorporated, S-tine,
Cultivator,
Vibra-shank Harrow,
Lilliston Tiller)
- 22 Furrow-out
- 23 Rotary Hoe
(Crust Buster)

Row

- 24 Disk Sweep, Shovel
- 25 Rolling, Rotary

Field Cultivator

- 26 Heavy Duty
(Duckfoot Cultivator)
- 27 Marker
- 28 Fallow Master

**SPECIALIZED APPLE
EQUIPMENT**

- 225 Orchard Sprayer
- 226 Air Blast Sprayer
- 227 Pruning Platform
- 230 Weed Badger
- 231 Wonder Weeder
- 232 Tree Planter
- 233 Spider
- 235 Skid/Skid Plate
- 236 Hauling Gin

FERTILIZER APPLICATORS

- 71 Aerial (Airplane)
- 72 Attachment to implement
- 73 Manure Spreader
- 74 Self-propelled
- 75 Truck Spreader
- Tractor Mounted**
- 76 Anhydrous
- 77 Dry
- 78 Liquid
- Trailer Mounted**
- 79 Anhydrous
- 80 Dry
- 81 Liquid

CHEMICAL APPLICATIONS

- 91 Aerial (Airplane)
- 92 Attachment to implement
- 93 Largest Self propelled
(or Large Truck)
- 94 Motorcycle/atv Sprayer
- 95 Small Self-propelled
(Spray-coupe, Hi-cycle)
- 96 Small Truck (Skid Mounted)
- 97 Tractor Mounted
- 98 Trailer Mounted

DRILLS and SEEDERS

- 101 Aerial Seeding
- 102 Broadcast Seeder

Drill

- 103 Air Delivery
- 104 Lister Disk
- 105 No-till or minimum till
- 106 Plain
- 107 Press, Disk or Hoe

HARVESTING EQUIPMENT

Small Grains/Row Crops Combine

- 121 Hillside
- 122 Self propelled, 2wd
- 123 Self-propelled, 4wd
- 124 Track
- 125 PTO/motor Mounted

Windrower-swather

- 126 (Grain/hay)PTO
- 127 (Grain/hay) self-propelled
- 133 Corn Picker
- 134 Hand Harvesting

PTO Power Take-off

WD Wheel Drive

LAND FORMING EQUIPMENT

- 171 Backhoe
- 172 Disk Border Maker
- 173 Ditch Closer
- 174 Ditcher
- 175 Levee Plow Disk
- 176 Quarter Drain Machine
- 177 Rear Mounted Blade
- 178 Corrugator
(Furrow Dicer, Dammar Dicer,
Dicer)
- 180 Land Plane Leveler
(Water Leveler)
- 181 Laser Planer, Laser Leveler
- 182 Gate Setter
- 183 Bull Dozer

ENUMERATOR NOTE:

*For Land Forming Equipment codes
171 – 183, enter Total Hours Operated
in column 9.*

MOWERS and BALERS

- 141 Amish Harvester
- Baler**
- 145 Motor Mounted
- 146 PTO (Large)
- 147 PTO (Small)
- 148 Self-propelled
- 159 Stacker, Automatic
- Mowers**
- 149 Mower-chopper-Rotary
- 150 Conditioner/PTO
- 151 Self-propelled
- 152 Drum disk
- 153 Flail
- 154 Sickle
- Rake**
- 155 Dump
- 156 Side Delivery
- 157 Wheel
- 162 Hay Tedder
- 234 Brush Rake Sweeper

HAULING EQUIPMENT

Bale wagon/mover

- 142 Bale wagon (PTO)
- 143 Bale Wagon (Self-propelled)
- 144 Bale Loader
- 158 Stack Mover
- 160 Front End Loader
- 161 Round Bale Mover
- 195 Hay wagon
- 224 Forklift

Trailers

- 194 General Purpose Wagon or Cart
- 195 Hay Wagon
- 208 Gravity Wagon
- 209 Grain Cart with Auger
- 221 Forage Wagon
- 222 Dump Wagon
- 229 Bin Trailer
- 228 Other Trailers

Trucks

- 301 Single Axle
- 302 Tandem Axle
- 303 Tri Axle
- 304 Semi
- 305 Other Trucks

ENUMERATOR NOTE:

*For Hauling Equipment codes above,
enter Total Hours Operated in
column 9.*

OTHER IMPLEMENTS

- 191 Burn Buggy
- 192 Chaff/straw Saver
- 193 Electric-discharge Weed Killer
- 196 Off-field Thresher
- 197 Rock Picker
- 198 Rock Windower or Rake
- 199 Rodent (Gopher) Killer
- 200 Roller Groover
- 201 Rubber-wheeled Weed Puller
- 202 Flail Shredder
- 203 Rotary Shredder
- 204 Silage Harvester
- 205 Stalk Shredder, Stalk Cutter
- 206 Swath Roller
- 207 Tractor or Truck–No attachments
- 223 Flame Thrower

SECTION G, IRRIGATION TYPE CODES

PRESSURE SYSTEMS	GRAVITY SYSTEMS
1 HAND-MOVE	10 SIPHON TUBE from unlined ditches
2 SOLID or PERMANENT SET	11 SIPHON TUBE from lined ditches
3 SIDE ROLL or WHEEL LINE	12 PORTAL SYSTEM from unlined ditches
4 CENTER PIVOT or LINEAR MOVE with sprinklers on main line	13 PORTAL SYSTEM from lined ditches
5 CENTER PIVOT or LINEAR MOVE with sprinklers below main line, but more than 2 feet above ground	14 ANY POLY PIPE SYSTEM
6 CENTER PIVOT or LINEAR MOVE with sprinklers less than 2 feet above ground	15 GATED PIPE (not poly pipe)
7 BIG GUN	16 IMPROVED GATED PIPE (surge flow or cablegation not poly pipe)
8 LOW FLOW IRRIGATION (drip, trickle or micro sprinkler)	17 SUBIRRIGATION
9 OTHER - SPECIFY	18 OPEN DISCHARGE FROM WELL or PUMP
	19 OTHER - SPECIFY

RUN-OFF CODES

Section G, item 10.

- | | |
|---|---|
| 1 | Retained at the end of the block? |
| 2 | Reused to irrigate on the farm? |
| 3 | Collected in evaporation ponds on the farm? |
| 4 | Drained from the farm? |
| 5 | There is no runoff. |