

# Asparagus

## Varieties

All male hybrids: Jersey Giant, Jersey Knight, Jersey King, Jersey Supreme.

Other hybrids: Atlas and Purple Passion (specialty markets only).

Open pollinated: Viking KB3, Mary Washington. Hybrid varieties have improved vigor, disease tolerance, and higher yields, and are grown from seeds or crowns.

Order well in advance.

## Planting and Spacing

**Crowns:** Use only 1-year old crowns. Transplant April 15 to May 15. Use 4- to 5-foot rows with crowns 12 to 16 inches apart. Set the crowns in 8-inch furrows in light soils and 5- to 6-inch furrows in heavy soils. Cover with 2 to 3 inches of soil. Select deep, well-drained sandy loam soils. Hybrids should be planted slightly deeper. Start cultivating when spears begin to emerge, and continue periodically until furrows are level at end of first season.

**Seedling transplant:** 10- to 14-week old seedling transplants can be mechanically transplanted. Apply 4 ounces of transplant solution (10-52-17 or 9-45-15) to each transplant. Transplant in either the spring or fall.

## Disease Control

Diseases Controlled	Treatment	Comments
Fusarium Crown and Root Rot	Manzate® at 1 lb. per 100 gallons of water for dry formulations, or at 0.8 qt. per 100 gallons of water for most liquid formulations. Dip loosely packed roots into continuously agitated fungicide suspension.	Avoid fields with a history of crown and root rot. Disease is promoted by acid (low pH) and poorly drained soil. Use tolerant varieties if available.
Rust and Leaf Spot (Cercospora)	Reduce crop residues by removing, mowing, or burning old ferns in the fall/winter.	
	Several chlorothalonil formulations (e.g., Bravo®, Echo®, Equus®) are labeled for use at various rates. Note that rates vary for different diseases.	Apply chlorothalonil formulations after harvest and at 14-28 day intervals. Protecting ferns during summer months is essential for good yields. 190-day PHI.

## Harvesting

Harvest only 2 or 3 times in spring 1 year after transplanting. Thereafter, harvest for about 2 months in the spring. Harvest asparagus early in the morning for best quality. Allow the ferns to grow vigorously after this period to accumulate food reserves for the next season. As much care should be put into maintaining a healthy fern as into harvest.

## Fertilizing

**Lime:** To maintain a soil pH of 6.7 to 7.0. If possible, apply lime the year before planting.

**Preplant:** N: 70 pounds per acre. P<sub>2</sub>O<sub>5</sub>: 25 to 200 pounds per acre. K<sub>2</sub>O: 0 to 250 pounds per acre. Adjust according to soil type, previous management, and soil test results for your state. Broadcast the fertilizer, and plow it under when preparing the land for the planting furrows. Before planting new crowns, apply 100 pounds per acre of 8-32-0, or similar high phosphate starter fertilizer, in the bottom of the trench. Cover with 1 inch of soil before setting crowns.

**Yearly:** Each year after harvest, apply 50 pounds N per acre by broadcasting and incorporate by lightly tilling. No P<sub>2</sub>O<sub>5</sub> or K<sub>2</sub>O is necessary if adequate fertilization was achieved prior to planting.

Diseases Controlled	Treatment	Comments
Rust and Leaf Spot (Cercospora) (continued)	Dithane®, Manzate®, or Penncozeb® at 2 lbs. per acre for dry (WP, DF, or DG) formulations or 1.6 qts. per acre for flowable (F) formulations.	Apply after harvest at 10-day intervals. Protecting ferns during summer months is essential for good yields the following season. 180-day PHI.
	Monsoon 3.6F® at 4-6 fl. oz. per acre. <b>Rust only.</b>	180-day PHI.
	Rally 40WSP® at 5 oz. per acre. <b>Rust only.</b>	Begin applications to the developing ferns after harvest. Repeat on a schedule of less than 14 days. 180-day PHI.
	Toledo 3.6F® at 4-6 fl. oz. per acre. <b>Rust Only</b>	180-day PHI.
Phytophthora Crown and Spear Rot	<b>BP</b> Agri-Fos®. See label for rate.	Note ratio of rate and water volume. Do not apply to ferns beginning to senesce.
	Aliette WDG® at 5 lbs. per acre.	Apply once per season to fully expanded ferns. 110-day PHI.
	<b>BP</b> Phostrol®. See label for rate.	Note ratio of rate and water volume. Do not apply to ferns beginning to senesce.
	Ridomil Gold SL® at 1 pt. per acre over bed.	Apply 30-60 days before first cutting. 1-day PHI.

## Weed Control

Weeds Controlled <sup>1</sup>	Treatment <sup>2</sup>	Comments
Annuals (emerged) — treatment applied before crop emergence or after final harvest	Gramoxone Inteon® 2L at 2.5-4 pts. per acre.	Include 1 qt. of COC, or 4-8 fl. oz. of nonionic surfactant per 25 gallons of spray solution. Apply before crop emergence or after last harvest. <b>RUP.</b> 6-day PHI.
Annuals and Perennials (emerged) — treatment applied before crop emergence or after final harvest	Glyphosate products at 0.75-3.75 lbs. acid equivalent (ae) per acre. Use formulations that contain 3 lbs. ae/gal. (equivalent to 4 lbs. isopropylamine salt/gal.) at 1-5 qts. per acre; or formulations that contain 4.5 lbs. ae/gal. (equivalent to 5 lbs. potassium salt/gal.) at 0.66-3.3 qts. per acre.	Apply to emerged weeds at least 7 days before spears emerge or immediately after the last harvest. Use low rate for annuals and higher rates for perennials. See label for suggested application volume and adjuvants. If spears are allowed to regrow, delay application until ferns have developed. Delayed treatments must be applied as a directed or shielded spray. Direct contact of the spray with asparagus fern may result in serious crop injury.
Broadleaves and Grasses (not emerged)	Chateau WDG® at 6 oz. per acre.	Apply to dormant asparagus at least two weeks before spears emerge. Crop injury may result if asparagus is not dormant. May be tank mixed with paraquat to control emerged weeds. Do not exceed 6 oz. per acre per growing season.
	Diuron products at 0.8-3 lbs. a.i. per acre. Use 80DF formulations at 1-4 lbs. per acre, or 4L formulations at 1.6-3 qts. per acre. <b>Do not apply to young plants during first year.</b>	Use lower rates on light-colored soils with less than 2% organic matter. Apply after tillage or chopping fern in the spring and again after harvest, if necessary. 6-8 weeks residual activity. Do not exceed 6 lbs. per acre per year.
	Prowl H2O® at 2.4-8.2 pts. per acre.	Apply at least 14 days before first harvest and prior to spear emergence. If spears are present, remove before application. On sandy soil use no more than 2.4 pts. per acre. 14-day PHI.
	Sencor 4F® at 0.5-2 qts. per acre, or Sencor 75DF® at 0.6-2.6 lbs. per acre. <b>Do not apply to young plants during first year.</b>	Apply after tillage or chopping fern in the spring and again after harvest, if necessary. Use lower rates for split applications. 6-8 weeks residual activity. Do not exceed 2 qts. or 2.6 lbs. per acre per year. 2 sprays necessary for seasonlong sandbur control. 14-day PHI.
	Solicam DF® at 2.5-5 lbs. per acre. <b>Do not apply within 12 months of planting.</b>	Apply preemergence to soil free of weeds and debris. 14-day PHI.
	Trifluralin products at 1-1.5 lbs. a.i. per acre. Use 4EC formulations at 1-1.5 qts. per acre. <b>Established plantings only.</b>	Apply and incorporate 1-2 inches early in the spring when spears are at least 4 inches below soil surface. Use higher rates on heavier soils. 4-6 weeks residual activity.

**BP** This is a biopesticide, see pages 23-24 for details.

Weeds Controlled <sup>1</sup>	Treatment <sup>2</sup>	Comments
Broadleaves and Grasses (not emerged or newly emerged)	Lorox 50DF® at the following rates: <b>Established beds or newly planted crowns, preemergence:</b> 2-4 lbs. per acre. <b>Established beds, postemergence:</b> 1-3 lbs. per acre, up to 3 applications. Apply before cutting season or immediately after cutting. <b>Newly planted crowns, postemergence:</b> 1-2 lbs. per acre, up to 2 applications. Apply when ferns are 6-18 inches tall.	Do not use on sand, loamy sand, or soils with less than 1% organic matter. Maximum 4 lbs. or 3 applications per acre per year. 1-day PHI.
	Sinbar 80W® at 0.62-1.5 lbs. per acre. <b>Established crowns or directed seeded plants only.</b>	Do not use on sandy soil or on soil with less than 1% organic matter. Apply in spring after cutting fern and prior to spear emergence. For seeded crops apply activated charcoal at 300 lbs. per acre in a 1-inch band over the row before Sinbar® application. Do not plant other crops within 2 years of application. 8-12 weeks residual activity. 5-day PHI.
Broadleaves (not emerged or emerged)  <div style="text-align: center;">RR</div>	Callisto 4L® at 3 fl. oz. per acre to control emerged weeds or 6-7.7 fl. oz. per acre to control weeds that have not emerged.	Apply in spring before spears emerge after mowing, disking, or tilling; after final harvest; or both. For postharvest applications: use drop nozzles or other equipment that will minimize contact with crop. Adding COC or NIS (alone, or with UAN or AMS) will improve emerged weed control and increase crop injury risk in postharvest applications. Do not exceed 2 applications per year, or 7.7 fl. oz. per acre per year.
Broadleaves (emerged)	2,4-D amine at 3-4 pts. per acre.	Apply before, during, or after the harvest season. During harvest season apply immediately after cutting. Discard deformed spears. Use drop nozzles for treatments after harvest to avoid spraying the fern.
	Clarity 4L® at 0.5-1 pt. per acre. Apply at 40-60 gals. per acre immediately after cutting.	Discard crooked spears at harvest. Clarity can injure nearby broadleaf crops and garden plants. Maximum 1 pt. per acre per year. 24-hour PHI.
	Savage WSG® at 1.5-2 lbs. per acre.	Apply before, during, or after the harvest season. During harvest season apply immediately after cutting. Discard deformed spears. Use drop nozzles for treatments after harvest to avoid spraying the fern.
Broadleaves (emerged) and Nutsedge	Sandea 75W® at 0.5-1.5 oz. per acre.	Apply before, during, or after harvest. Drop nozzles and using COC or nonionic surfactant are recommended for applications after harvest. For first year transplants, do not apply sooner than 6 weeks after fern emergence. Do not exceed 2 applications per crop cycle, or 2 oz. per acre per 12-month period. Has residual soil activity. 1-day PHI.
Grasses (emerged)	Clethodim products at 0.068 to 0.125 lb. a.i. per acre. Use formulations with 0.97 lb. a.i. per gallon at 9-16 fl. oz. per acre. Use formulations with 2 lb. a.i. per gallon at 6-8 fl. oz. per acre.	Use 1 qt. COC per 25 gallons of spray solution (1% v/v). Spray on actively growing grass. Wait at least 14 days between applications. 1-day PHI.
	Fusilade DX 2E® at 8-12 fl. oz. per acre.	Include 1-2 pts. of COC or 0.5-1 pt. of nonionic surfactant per 25 gallons of spray solution. Spray on actively growing grass. Rates may be doubled if asparagus will not be harvested for 12 months. Wait at least 14 days between applications. Do not exceed 48 fl. oz. per acre per season on bearing asparagus. 1-day PHI.
	Poast 1.5E® at 1-1.5 pts. per acre, plus 1 qt. COC per acre.	Spray on actively growing grass. Use high rate on quackgrass. Do not exceed 5 pts. per acre per season. 1-day PHI.

<sup>1</sup> For specific weeds controlled by each herbicide, check Table 21 on page 39.


<sup>2</sup> Rates given are for overall coverage. For band treatment, reduce amounts according to the portion of acre treated.

**RR** This is a reduced-risk pesticide. See pages 23-24 for details.

## Insect Control

Insects Controlled	Treatment	Comments
Asparagus Beetles and Cutworms	For control on spears during harvest, to prevent egg laying and feeding injury:	
	Lannate SP® at 0.5-1 lb. per acre.	Do not exceed 8 applications per crop. Use high rate for white cutworm. 1-day PHI. RUP.
<b>Insect Thresholds</b>	Lorsban 4E® at 2 pts. per acre, or Lorsban 75WG® at 1.33 lbs. per acre.	Do not make more than 1 preharvest application. Broadcast with ground equipment. 1-day PHI. RUP.
<b>Insect Thresholds Harvest</b>	Malathion 5EC® at 2 pts. per acre. <b>Asparagus beetles only.</b>	1-day PHI.
	Pounce 25WP® at 3.2-6.4 fl. oz. per acre.	Do not exceed 0.4 lb. a.i. per season. 1-day PHI. RUP.
<b>Asparagus Beetle:</b> 5-10% plants infested or 2% of spears with eggs	Sevin XLR PLUS® at 1 qt. per acre, or Sevin 5B® at 40 lbs. per acre.	Do not treat more than once every 3 days. Bait for cutworms only. 1-day PHI.
	For control on seedlings and fern growth after harvest is over (use lower rates for seedlings):	
<b>Cutworms:</b> 5% of crowns infested	Dimethoate 400® or Dimethoate 4E® at 1 pt. per acre. <b>Asparagus beetles only.</b>	Do not exceed 5 pts. per acre per year. 180-day PHI
	Entrust® at 1.25-2.0 oz. per acre. <b>Asparagus beetles only.</b>	Do not exceed 5.6 oz. per acre per season. 60-day PHI.
<b>Fern</b>	Radiant SC® at 4-8 fl. oz. per acre. <b>Asparagus beetles only.</b>	Do not exceed 24 fl. oz. per acre per season. 60-day PHI.
	Sevin XLR PLUS® at 2-4 qts. per acre.	Do not treat more than once every 7 days. Do not exceed 5 applications per year to spears and ferns combined.
<b>Asparagus Beetle:</b> 10% defoliation or 50% of plants with larvae	SpinTor 2SC® at 4-6 fl. oz. per acre. <b>Asparagus beetles only.</b>	Do not exceed 18 fl. oz. per acre per season. 60-day PHI.
<b>Fall</b>		
<b>Cutworms:</b> 1 larva per 20 plants		

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 May be acceptable for use in certified organic production. Check with your certifier before use.



*Scout fields for asparagus beetle and apply insecticides applications if they reach the thresholds described above.*