Asparagus Varieties

Hybrid varieties have improved vigor, disease tolerance, and higher yields, and are grown from seeds or crowns. All-male hybrids have higher yields and do not produce seed. Absence of seed production is desirable because seeds develop into volunteer asparagus seedlings that are a weed problem. Order hybrids well in advance.

All-male hybrids (listed in order of performance): Jersey General, Jersey Giant (56X22-8), Millenium, Jersey Knight, Jersey King, Jersey Supreme.

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

Non-hybrids: Viking KB3, Mary Washington.

Planting and Spacing

Crows: 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.

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. P₂O₅: 25 to 200 pounds per acre. K₂O: 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 P₂O₅ or K₂O is necessary if adequate fertilization was achieved prior to planting.

Disease Control

Fusarium Crown and Root Rot

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.

Fields with Fusarium crown and root rot symptoms may benefit from applying 450 lbs./A of rock salt (NaCl) applied in the spring with fertilizers. Do not apply rock salt to healthy asparagus fields. Do not apply rock salt to fields with a pH less than 5.5.

Recommended Products

Manzate® at 1 lb. per 100 gals. of water for dry formulations, or at 0.8 qt. per 100 gals. of water for most liquid formulations.

Rust and Leaf Spot (Cercospora)

Reduce crop residues by removing, mowing, or burning old ferns in the fall/winter.

Recommended Products

Bravo®, Echo®, Equus®, and Initiate® are labeled for use at various rates. 190-day PHI.

Dithane®, Manzate®, or Penncozeb® at the following rates:

Dry (WP, DF, or DG) formulations: 2 lbs. per acre.
Flowable (F) formulations: 1.6 qts. per acre. 180-day PHI.

Monsoon 3.6F®, Onset®, Toledo 3.6F®, Vibe® at 4-6 fl. oz. per acre. Rust only. 180-day PHI.

Rally 40WSP® at 5 oz. per acre. Rust only. 180-day PHI.

Phytophthora Crown and Spear Rot

Recommended Products

Agri-Fos®. See label for rate.

Aliette WDG® at 5 lbs. per acre. 110-day PHI.
**Asparagus - Weed Control**

**Phostrol®** at 2.5-5 pts. per acre. Do not apply to ferns that are beginning to senesce.

**Ridomil Gold SL®** at 1 pt. per acre. 1-day PHI.

**Weed Control**

Before establishing an asparagus planting, reduce perennial weeds in the area to be planted. Good weed control in the planting year is especially important. Herbicide options are limited in the planting year, so cultivation and hand hoeing may be needed to achieve good control.

A typical weed control program in asparagus includes a preemergence herbicide with a long residual applied before asparagus emerges. If needed, a preemergence herbicide may be applied again after harvest is finished. Postemergence herbicides are also available — some may be applied before asparagus emerges, others may be applied during or after the harvest season, and some require directed or shielded spray applications to avoid spraying asparagus.

It is important use herbicides with different modes of action from year to year to avoid buildup of weed species not controlled by a particular mode of action. When herbicides are not used, weed control methods include cultivation, hand-weeding, flaming, mowing, and mulching. It is important to avoid damaging crowns when cultivating.

For specific weeds controlled by each herbicide, check Table 26 on page 63.

Rates provided in the recommendations below are given for overall coverage. For band treatment, reduce amounts according to the portion of acre treated.

**Preemergence Broadleaves and Grasses**

**Recommended Products**

**Chateau WDG**® at 6 oz. per acre. Apply to dormant asparagus at least 2 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. Do not apply to young plants during first year. 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. Do not apply to young plants during first year. 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.

**Sinbar 80W®** at 0.62-1.5 lbs. per acre. Established crowns or directed seeded plants only. 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.

**Solicam DF®** at 2.5-5 lbs. per acre. Do not apply within 12 months of planting. 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. Established plantings only. 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.

**Preemergence Broadleaves**

**Recommended Products**

**Callisto 4L®** at 6-7.7 fl. oz. per acre. Apply in spring before spears emerge after mowing, disking, or tilling; after final harvest; or both. Do not exceed 2 applications per year, or 7.7 fl. oz. per acre per year.

**Lorox 50DF®** at 2-4 lbs. per acre. 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.

This is a reduced-risk pesticide. See page 36 for details.
**Postemergence Broadleaves and Grasses**

**Recommended Products**

**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.

**Gramoxone Inteon2L**® at 2.5-4 pts. per acre. Include 1 qt. of COC, or 4-8 fl. oz. of NIS per 25 gallons of spray solution. Apply before crop emergence or after last harvest before fern regrows. RUP. 6-day PHI.

**Postemergence Broadleaves**

**Recommended Products**

**Callisto 4L**® at 3 fl. oz. per acre. 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.

**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.

**Lorox 50DF**® at 1-3 lbs. per acre and up to 3 applications for established beds. Apply before cutting season or immediately after cutting. For newly planted crowns apply 1-2 lbs. per acre, up to 2 applications when ferns are 6-18 inches tall. Do not use on sand, loamy sand, or soils with less than 1% organic matter. 1-day 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.

**Sandea 75W**® at 0.5-1.5 oz. per acre. Apply before, during, or after harvest. Drop nozzles and using COC or NIS 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. Effective on nutsedge. 1-day PHI.

**Postemergence Grasses**

**Recommended Products**

**Clethodim** products at 0.068-0.125 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. Rates may be doubled if asparagus will not be harvested for 12 months. 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 NIS per 25 gallons of spray solution. Spray on actively growing grass. 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.
<table>
<thead>
<tr>
<th>Product (REI/PHI)</th>
<th>Common Name</th>
<th>Timing and Application Location Relative to Crop</th>
<th>Timing Relative to Weeds</th>
<th>Weed Groups Controlled</th>
<th>Comments</th>
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<tbody>
<tr>
<td>Callisto 4L* (12h/-)</td>
<td>mesotrione</td>
<td>Before spears emerge in spring</td>
<td>OK on Young Plantings?</td>
<td>Preemergence</td>
<td>Annual grasses</td>
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<tr>
<td>Chateau* (12h/-)</td>
<td>flumioxazin</td>
<td>After final harvest before fern grows</td>
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<td>Clarity 4L* (24h/1d)</td>
<td>dicamba</td>
<td>During harvest period after cutting spears</td>
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<tr>
<td>Diuron*, others (12h/-)</td>
<td>diuron</td>
<td>Postemergence to ferns after harvest</td>
<td>Postemergence</td>
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<tr>
<td>Fusilade DX 2E* (12h/1d)</td>
<td>fluazifop</td>
<td>Directed or shielded spray to ferns after harvest</td>
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<td>Gramoxone Inteon 2L* (12h to 24h/6d)</td>
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<td>Lorox 50DF* (12h/1d)</td>
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<td>Prowl H2O* (12h/14d)</td>
<td>pendimethalin</td>
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<td>Sandea* (12h/1d)</td>
<td>halosulfuron</td>
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<td>Savage WSG*, others (48h)</td>
<td>2,4-D amine</td>
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<td>Select Max*, others (12h/1d)</td>
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<tr>
<td>Sencor 4F* or 75DF (12h/14d)</td>
<td>metribuzin</td>
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<tr>
<td>Sinbar* (12h/5d)</td>
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<td>SolicaM DF* (12h/14d)</td>
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<tr>
<td>Trelan*, others (12h/-)</td>
<td>trifluralin</td>
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1For effectiveness against specific weeds, see Table 26 on page 63, and read label. This table does not include all label information. Be sure to read and follow all instructions and precautions on the herbicide label. Herbicides can cause serious crop injury and yield loss if not used properly.
Insect Control

Asparagus Beetles and Cutworms
Treat when insects reach the economic thresholds described below.

Harvest
Asparagus Beetle
5-10% plants infested or
2% of spears with eggs

Cutworms
5% of crowns infested

Fern
Asparagus Beetle
10% defoliation or
50% of plants with larvae

Fall
Cutworms
1 larva per 20 plants

Recommended Products
For control on spears during harvest, to prevent egg laying and feeding injury:

Assail 30SG® at 2.5-5.3 oz. per acre. Do not exceed 2 applications per season. Do not exceed 10.7 oz. per acre per season. 1-day PHI.

Lannate LV® at 1.5-3 pts. per acre. Do not exceed 8 applications per crop. Use high rate for white cutworm. 1-day PHI. RUP.

Lorsban 4E® 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.

Malathion 57EC® at 1.5-2 pts. per acre. Asparagus beetles only. 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.

Sevin XLR PLUS® (4F) at 2-4 qts. per acre. Do not treat more than once every 3 days. Do not exceed 5 applications per year to spears and ferns combined.

For control on seedlings and fern growth after harvest is over (use lower rates for seedlings):

Dimethoate 400® or Dimethoate 4E® at 1 pt. per acre. Asparagus beetles only. Apply after harvest. Do not exceed 1 lb. a.i. per acre per season. 180-day PHI.

Entrust® at 4-6 fl. oz. per acre. Asparagus beetles only. Do not exceed 18 fl. oz. per acre per season. 60-day PHI.

Radiant SC® at 4-8 fl. oz. per acre. Asparagus beetles only. Do not exceed 24 fl. oz. per acre per season. 60-day PHI.

Sevin XLR PLUS® (4F) at 2-4 qts. per acre. Do not treat more than once every 3 days. Do not exceed 5 applications per year to spears and ferns combined.

This is a reduced-risk pesticide. See page 36 for details.
May be acceptable for use in certified organic production. Check with your certifier before use.

Harvest asparagus spears in the morning for best quality.