

Mint

Peppermint and Spearmint Varieties

Peppermint: Black Mitcham, Robert’s Mitcham, Todd’s Mitcham, and Murray Mitcham. The latter three varieties are more resistant to verticillium wilt.

Spearmint: Scotch Spearmint and Native Spearmint. These two spearmints have distinctly different oils.

Planting and Rotation

Mints are grown from dormant runners (stolons) dug from existing fields in the late fall or spring. Because verticillium wilt disease is an important problem (even with the more resistant varieties), growers should always use disease-free planting stock. Certified and disease-free stocks are available. Also, careful fall plowing of established stands is important for both winter protection

and for reducing the incidence of mint rust and other foliar diseases. “Squirrely” mint, which occurs primarily on peppermint, is caused by the mint bud mite, *Tarsonemus pipermenthae*.

Although mints are perennials, stands should not be maintained longer than 3 or 4 years in a rotation program. Older stands may show serious build-ups of disease, insect, and weed problems.

Irrigation significantly increases oil yields both on muck and mineral soils, even in seasons with normal rainfall.

Fertilizing

For established mint, apply 120 to 150 pounds N per acre in split application (before emergence and before canopy closure). Potash and phosphorous should be maintained at 400 pounds K₂O per acre and 50 pounds P₂O₅ per acre.

Disease Control

Diseases Controlled	Treatment	Comments
Spearmint Rust, Septoria Leaf Spot	Several chlorothalonil formulations (e.g., Bravo®, Echo®, Equus®) are labeled for use at various rates. Note that rates vary for different diseases. Indiana only.	Repeat spray at 7-10 day intervals for a total of 3 sprays. 80-day PHI.
	Headline 2.09EC® at 9-12 fl. oz. per acre. Rust only.	14-day PHI.
	RR Quadris® at 6.2-15.4 fl. oz. per acre. Rust only.	Do not apply more than 2 times before alternating with a fungicide with a different mode of action. 7-day PHI for processed mint.
	Rally 40WSP® at 4-5 oz. per acre. Rust only.	30-day PHI.
Verticillium Wilt	Use wilt-resistant varieties of peppermint. Native spearmint is resistant.	Rotate plantings after no more than 3 or 4 years.

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

Weed Control

Weeds Controlled ¹	Treatment ²	Comments
Annuals (emerged) — treatment applied before crop emergence	Gramoxone Inteon 2L [®] at 2-3 pts. per acre.	Use 1 qt. of COC or 4-8 fl. oz. of nonionic surfactant per 25 gallons of spray solution. Apply before crop begins to grow in spring. Do not exceed 3 pts. of Gramoxone Inteon 2L [®] or 2 pts. of Gramoxone Max 3L [®] per acre per season. RUP.
	Chateau WDG [®] at 2-3 oz per acre, or Chateau SW [®] at 4 oz per acre.	Use nonionic surfactant according to label instructions. Apply when mint is dormant. Tank mix with paraquat (see paraquat label for rates). Adding a nitrogen source will increase activity. Do not apply to frozen ground. Do not exceed 4 oz. per acre in a single application or more than 8 oz. per acre in a single growing season. Make no more than 1 sequential application of Chateau [®] within 60 days of first application. Applying to nondormant mint may result in unacceptable injury. 80-day PHI.
Broadleaves and Grasses (not emerged or newly emerged)	Sinbar 80WP [®] at 1-2 lbs. per acre, or 0.25-0.5 lb. per acre plus surfactant or crop oil postemergence to the crop and small weeds.	Apply before mint emerges. Do not exceed 2 lbs. per acre per season. 60-day PHI.
Broadleaves and Grasses (not emerged)	Chateau WDG [®] at 2-3 oz per acre, or Chateau SW [®] at 4 oz per acre.	Apply prior to weed and crop emergence. Crop must be dormant. See notes above for Annuals (emerged). 80-day PHI.
	Command 3ME [®] at 1.3 pts. per acre.	Apply in spring before mint starts to grow. Do not apply to emerged mint. Do not exceed 1 application per season. Some whitening of tissue may occur as mint emerges. 84-day PHI.
	Prowl H ₂ O [®] at 1.5-4 pts. per acre. Established mint only.	Use low rate on coarse soils. Apply to dormant mint before mint and weeds start to grow. 90-day PHI.
	Trifluralin products at 0.5-0.75 lb. a.i. per acre. Use 4EC formulations at 1-1.5 pts. per acre, or 10G formulations at 5-7.5 lbs. per acre.	Use low rate on coarse soils. Apply late winter or early spring, or in the fall after harvest when mint is dormant or semi-dormant. Incorporate or irrigate with 0.5 in. water.
Broadleaves (not emerged)	Spartan 75DF [®] at 3-6.7 oz. per acre.	Apply to established mint when it is dormant — in the fall after post harvest cultivation, and/or in the spring after cultivation. For new mint, use 2.25-5 oz. per acre and apply before mint emerges. Rainfall or irrigation is required to move herbicide into the soil. Application may injure crop as mint emerges. Application to emerged mint will result in severe injury. Do not exceed 8 oz. per 12-month period.
Broadleaves (not emerged or newly emerged)	Goal 2XL [®] at 2-3 qts. per acre in 20-40 gals. of water per acre. Indiana only.	Use 8 fl. oz. of nonionic surfactant per 25 gallons of spray solution if emerged weeds are present. Apply to dormant spearmint and peppermint on muck soil (greater than 20% organic matter) before weeds are 4 in. tall. Not for use on mineral or black sand soils. Application to emerged mint will result in severe injury.
Broadleaves and Nutsedge (emerged)	Bentazon products at 0.5-1 lb. a.i. per acre. Use 4L formulations at 1-2 pts. per acre.	Apply after mint and weeds have emerged. To control yellow nutsedge and Canada thistle, repeat application 7-10 days later. Crop oil will enhance activity. Do not exceed 4 pts. per acre per season.

Weeds Controlled ¹	Treatment ²	Comments
Broadleaves (emerged)	Buctril 2E [®] at 1-1.5 pts. per acre in at least 10 gals. water per acre, or Buctril 4EC [®] at 8-12 fl. oz. per acre in at least 10 gals. water per acre.	Apply before weeds have more than 4-6 leaves, and only on established mint that has been harvested at least one year prior to application. Buctril [®] may cause temporary stunting and chlorosis of mint. Do not apply to mint growing under stressful conditions when air temperatures are, or are expected to be, more than 70°F within 5 days of application. 70-day PHI.
	Thistrol [®] at 1-2 pts. per acre.	Apply in spring after mint emerges to suppress broadleaf weeds, or apply in fall to control winter annuals. May injure mint. Oil yields may be reduced if mint is more than 6 inches tall. Bindweed suppression is best with spring application when weeds are 6-8 inches long. 40-day PHI.
Broadleaves (emerged) — primarily composites and nightshade	Stinger 3EC [®] at 0.33-1 pt. per acre	Use 4 fl. oz. of nonionic surfactant per 25 gallons of spray solution. Apply up to 0.5 pt. in spring or up to 1 pt. in fall. To control Canada thistle in spring, apply before bud stage. Do not use mint straw, hay, or spent hay for compost or mulch and do not dispose of on land to be rotated to broadleaf crops. Do not exceed 1 pt. per acre per growing season. 45-day PHI.
Grasses (emerged)	Assure II [®] at 8-12 oz. per acre.	Use 1 qt. of COC per acre. Apply to actively growing grass. Do not exceed 2 applications or 30 fl. oz. per acre per season. 30-day PHI.
	Poast 1.5E [®] at 1-1.5 pts. per acre.	Use 1 qt. of COC per acre. Spray on actively growing grass. Do not exceed 2 applications per season. 20-day PHI.
	Select Max [®] at 12-32 fl. oz. per acre, or Select 2EC [®] at 6-16 fl. oz. per acre	Use 1 qt. of COC per 25 gallons of spray solution (1%v/v). Spray on actively growing grass. Use at least 16 fl. oz. Select Max [®] , or 8 fl. oz. of Select 2EC [®] on established mint. Wait at least 14 days between applications. 21-day PHI.

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

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



Good weed control before row closure boosts mint production.

Insect Control

Insects Controlled	Treatment	Comments
Cutworms, Loopers	BP Various <i>Bacillus thuringiensis</i> formulations (Agree [®] , Biobit [®] , Dipel [®] , Javelin [®] , Lepinox [®] , etc.) are available. Follow label rates.	0-day PHI.
	RR Avaunt 30WDG [®] at 3.5 oz. per acre.	Do not exceed 14 oz. per acre per season. 7-day PHI.
	RR Intrepid [®] at 10-15 fl. oz. per acre.	14-day PHI.
	Lannate SP [®] at 1 lb. per acre.	Do not exceed 1.8 lbs. a.i. per acre per crop. 14-day PHI. RUP.
	Lorsban 4E [®] at 2-4 pts. per acre, or Lorsban 75WG [®] at 1.33-2.67 lb per acre.	Use lower rate when cutworm larvae are less than 0.75 inch long. Only 1 application per growing season. 90-day PHI.
	Orthene 97 [®] at 1 lb. per acre.	Do not exceed 2 1/8 lbs. a.i. per acre per season. 14-day PHI.
	RR Radiant SC [®] at 4-12 fl. oz. per acre.	Do not exceed 39 fl. oz. per acre per season. 7-day PHI.
	RR SpinTor 2SC [®] at 4-10 fl oz. per acre.	Do not exceed 29 fl. oz. or 3 applications per acre per season. 7-day PHI.
	Voliam Flexi [®] at 4-5 oz. per acre.	Do not exceed 15 fl. oz. per acre per season. 7-day PHI.
Flea Beetles	RR Actara [®] at 1.5-3.0 oz. per acre.	Do not exceed 12 oz. per acre per season. 7-day PHI.
	Lannate SP [®] at 0.75-1 lb. per acre.	For best results, apply immediately after harvest on stubble. Do not exceed 1.8 lbs. a.i. per acre per crop. 14-day PHI. RUP.
	Malathion 5EC [®] at 1 pt. per acre.	For best results, apply immediately after harvest on stubble. 7-day PHI.
Mites	RR Acramite 50WS [®] at 0.75-1.5 lbs. per acre.	Do not exceed 1 application per season. 7-day PHI.
	Agri-mek 0.15EC [®] at 8-12 fl. oz. per acre.	Do not exceed 36 fl. oz. per acre per season. 28-day PHI. RUP.
	Kelthane MF [®] at 1.75-2.5 pts. per acre.	Do not exceed 1 application per season. 30-day PHI.

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