

## Agar-based Bait for Argentine Ant

*Instructions for preparing and deploying in vineyards*



### Materials Required

#### Bait Supplies

- Water
- Table sugar
- Boric Acid (technical grade)
- Organic Agar Agar powder

#### Other Supplies

- Electric drill with stirrer attachment or similar tool
- Bucket (to measure sugar and water)
- Smaller container (to measure crystals)
- Scale & container (to measure boric acid)
- Appropriate personal protective equipment (PPE) (eg. gloves, hazmat suit, mask or respirator)
- Large (e.g. 50 L) metal cooking pot(s) (to mix and heat agar solution)
- Large gas burner(s) and gas (to heat solution)
- Heat proof gloves (2 pairs)
- Macrobin(s) with lid(s)
- Labels to attach to macrobin indicating appropriate pesticide warnings

### Bait Preparation

Use this table to calculate component amounts (adjust accordingly if not using 100% boric acid)

Finished Volume	Water	Sugar	100% Boric acid	Agar Agar Powder	Target a.i. concentration
1 Liter (L) (0.26 gal)	735ml (25.4 fl oz)	250 ml (8.5 fl oz)	5 g	10ml (0.34 fl oz)	0.5%
10 Liter (2.64 gal)	7.35L (1.94 gal)	2.5L (0.66 gal)	50 g	100ml (3.38 fl oz)	
40 Liter (10.57 gal)	29.4L (7.77 gal)	10L (2.64 gal)	200 g	0.4L (13.53 fl oz)	

## Bait Mixing Instructions

**Add** water, sugar, and agar powder to cooking pot and **stir**. Hot water should be used (if available) to reduce heating time in later steps.

**Lift** pot on to gas burner. Two people should do this to avoid injury.

**Heat** to boiling and simmer for 3 minutes. Heating to **boiling point** is critical for agar solution to set.



**Multiple burners** and pots allow faster production.



**Add** heated solution to macrobin. Two people should lift pot wearing heat-resistant gloves.



**Repeat** until macrobin contains desired volume of sugar and agar solution.



**Add** boric acid to small container with some of the water. **Mix** to dissolve completely.



**Add** boric acid to macrobin & **mix** thoroughly with electric drill or similar tool.

**Cover** macrobin with lid. **Affix** appropriate labels indicating pesticide.

**Wait** for solution to set to a gelatinous consistency. This may take 2-3 days, dependent on outside temperature.

## Apply the Bait

**Load** macrobin onto trailer and attach to tractor for broadcast application. Be sure to wear appropriate PPE.



**Use** scoop to hand apply bait.



**Apply** a total of 10 gallons of bait per acre. Applications can be made in alternate rows, and dispersed using a scoop or other tool, in 1/4 to 1/3 cup mounds.

**Application Frequency:** Plan to make 2 applications, at 4 to 6-week intervals **in spring** to target Argentine ants.



## Additional Resources

**Mealybug and vineyard ant identification, detection, and monitoring:**

<https://ucanr.edu/county/napa-county-ucce/pest-and-disease-identification-and-management>

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