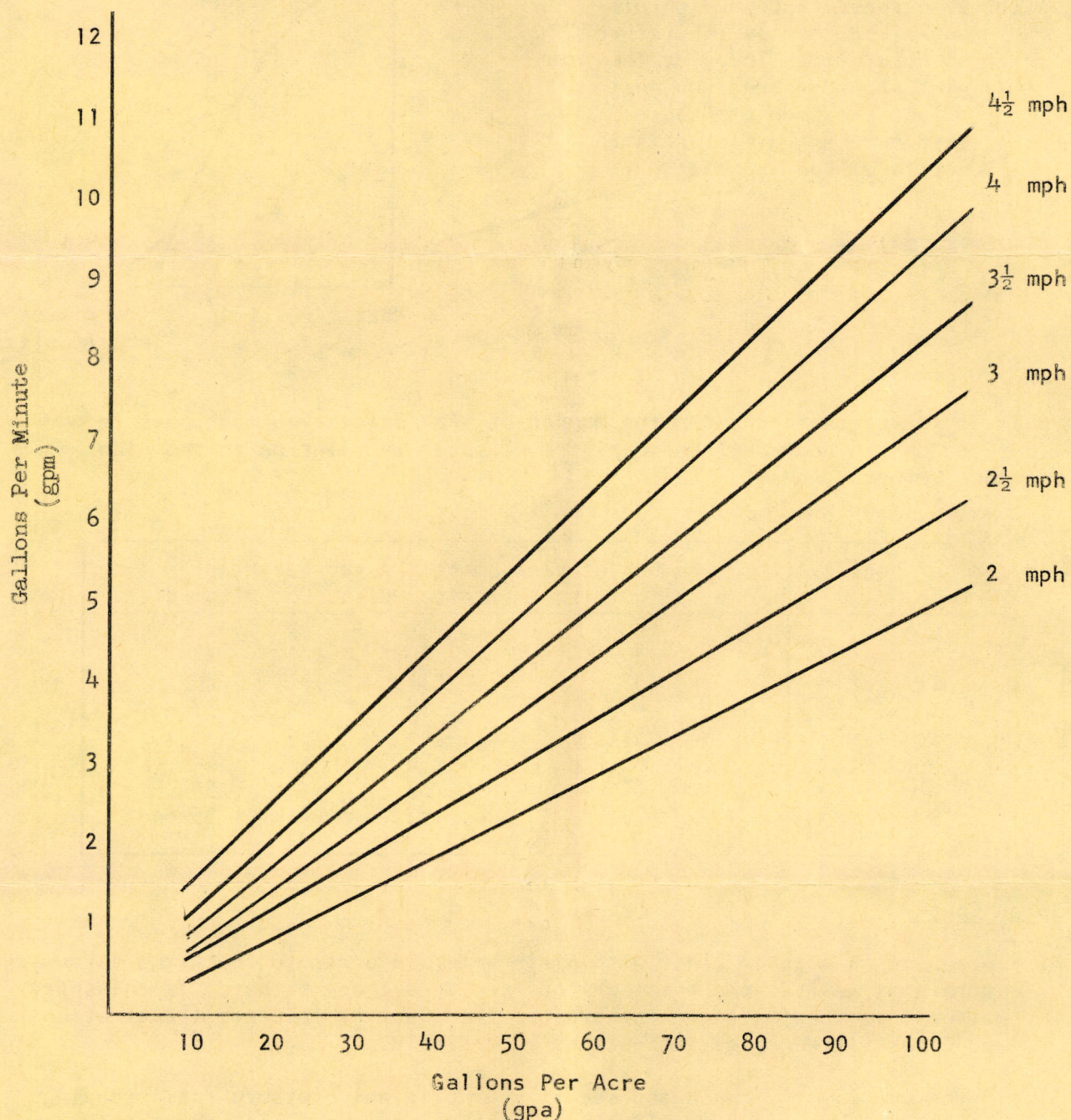


Information on Proper Calibration for Spraying Grapes

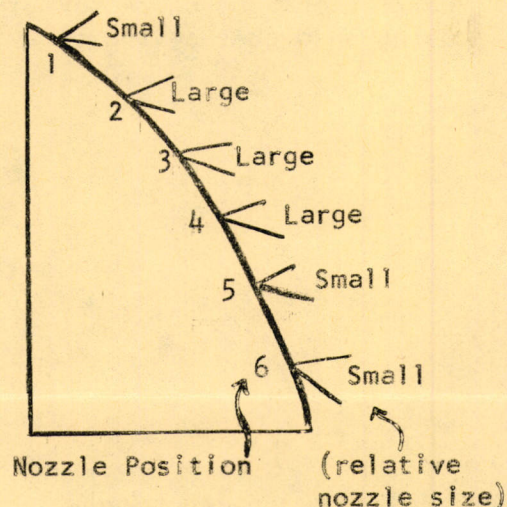
1. Chart to determine gallons per minute (gpm) necessary at various spray rates per acre (gpa) and speeds of travel (mph) in 12 foot rows. This is for air carrier or boom units spraying each row. (Multiply the gpm figure by 2 if using an over-the-vine sprayer that treats two complete rows at once.)



2. For example: If the rate you wish to spray is 30 gpa and the speed of travel is 3 mph - the chart shows that a 2.3 gpm nozzle discharge (total for both sides) is necessary. If you have 12 total nozzles (6 nozzles per side), then divide 12 into 2.3 gpm and this gives you the gpm discharge per nozzle. By consulting a nozzle chart for your particular type of nozzle and in the column headed by your sprayer's operating pressure (pressure at the nozzle),

you can easily find the correct size nozzle needed. Due, however, to the fact that vines are not as thick or dense uniformly from the ground up, it is best to use at least 2 different sizes of nozzles. By doing this (which involves a little amount of juggling with your nozzle gpm division) you can place more of your spray (by using some larger nozzles) into the shoulder area of the vines where the growth and pests are generally the most dense.

NOTE: Some sprayers come with all-one-sized nozzles, therefore, to obtain more spray at the vine shoulder area you must adjust the amount of spray feed by using different size nozzles. For example



3. Speed of travel table showing the number of vine spaces you must pass in one minute to obtain your desired (mph) travel speed in relation to the planting distance between vines.

Miles per hour (mph)	Number of Vine Spaces Passed Per Minute		
	6' pltg. dist.	7' pltg. dist.	8' pltg. dist.
2	30	25	22
2½	37	31	28
3	44	38	33
3½	51	44	39
4	59	50	44
4½	66	57	50
5	73	63	55

4. Spray Check

- A. Spray out an acre of vines with plain water in order to check the spray pattern as well as the total gallons per acre (gpa) output. If the spray pattern needs adjusting in regards to the observed coverage (penetration and deposit) rearrange the nozzles accordingly.
- B. If the gpa is off, check and see if your original pressure (psi) reading (necessary for proper nozzle size selection) was wrong, if your nozzle size selections were incorrect or if your speed of travel was too slow or fast.