

Inoculum and inoculation procedure BCMNV and BCMV
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BCMNV and BCMV are seed-borne disease. Sutter Pink, a universal susceptible cultivar, is used as source of inoculum. The infected seeds came from previously inoculated plants with the virus are planted in pots as inoculum source. After the seeds germinate, the leaves that show mosaic are cut and placed in bowl. Two buffer solutions (Sodium and Potassium phosphate) and carborundum (Silicon Carbide grain) are added to the bowl. The leaves are grinded and the solution is applied on the leaves by rubbing gently using cheesecloth or sponge. After ten days from the inoculation day the symptoms will start showing from inoculated leaves and young trifoliolate leaves. Mosaic symptom is expected to be seen from inoculated Sutter Pink leaves lacking resistance gene and top necrosis from Black Hawk showing resistance gene. There are also other resistant genes available in different varieties (Table 1)

Table 1: The differential host reactions of seven varieties of common bean with the NL3 strain of BCMNV

Variety	Genotype	symptom
Black Hawk (control)	II	TN-Top Necrosis
Sutter Pink (control)	ii	M-Mosaic
Olathe	iibc-1 ² bc-1 ²	MM-Mild Mosaic
Kodiak	IIbc-1 ² bc-1 ²	VN-Vein Necrosis
92US-1000	IIbc-2 ² bc-2 ²	LL-Local Lesions
Othello	iibc-2 ² bc-2 ²	NR-No Reaction
Raven	IIbc-3bc-3	NR-No Reaction

Source: Kelly (1997)

Buffer solutions:

Stock solutions:

- 1) weigh 6.8g Potassium Phosphate in 500ml
- 2) weigh 14.2g of Sodium Phosphate in 1000ml

Working solution

Take 30ml of Potassium Phosphate and 70ml of Sodium Phosphate and add 900ml of di-ionized distilled water.

Both stock and working solutions have to be refrigerated.

