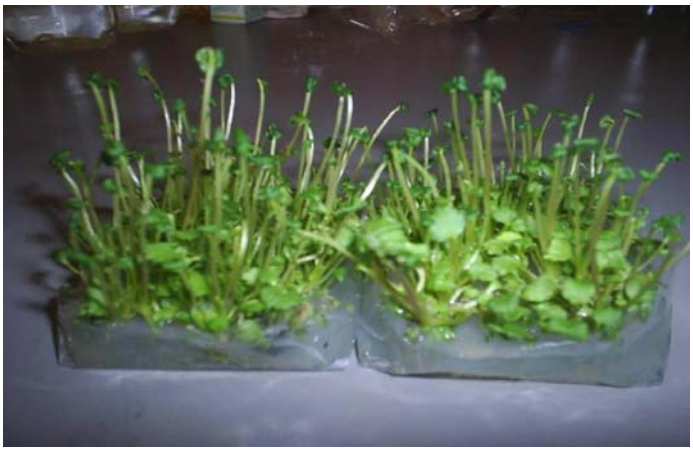
EFFECT OF EXPLANT STERILIZATION METHOD AND CULTURE MEDIA ON *IN VITRO* PROPAGATION OF STRAWBERRY (F*ragaria xannanasa*)

As with many other vegetatively propagated crops, tissue culture is an important method of rapid propagation of disease free planting materials for strawberry production. The most popular way is to use *in vitro* propagated plantlets to produce healthy runner plants as planting stocks for fruit production. The quality of the *in vitro* propagated plantlets is therefore an important factor that affects the quality and quantity of the runner plants as well as growth and fruit yield of a strawberry garden later on (Rancillac & Nourrisseau, 1989; Stapteton *et al.*, 2001).



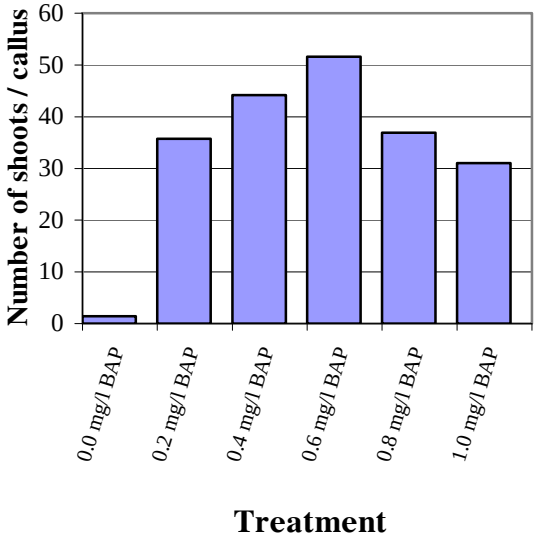
Because of a great variation of quality between the *in vitro* plantlets produced by different tissue culture labs currently in operation in Dalat, the research was carried out at the PVFC in attempt to standardize the propagation procedure for production of high quality planting materials for strawberry production.

Experiments were conducted to investigate (1) the effect of different concentrations of calcium hypochlorite (CH) solution on sterilization of apical doom, (2) the influence of the culture medium chemical components on *in vitro* rapid propagation and rooting, (3) the greenhouse establishment of the popular variety My Da. Murashige-Skoog (MS) (1962) supplemented with 8g/l agar, 30 g/l sucrose, at pH 5.8 was used as the basic culture medium for all experiments. Standard tissue culture protocols were applied throughout all experimental operations.

Results obtained indicated that 8% solution of the currently available preparation 36% CH was highly effective in sterilization of apical dooms from runners for 15 minutes (85.6 % live explants free from contamination). MS medium containing 0.4-0.6 mg/l BAP gave the highest shoot multiplication rate (51.6 x) with good shoot appearance (Figure 1).

Invitro Seedlings at the nursery

Figure 1. Effect of 6-benzyl-amino purine (BAP) on in-vitro multiplication of strawberry.



Shoot buds excised from callus masses, cultured in MS medium supplemented with high concentration of BAP, grew best in height when sub-cultured twice after every 15 days on MS medium free of plant growth regulators. MS medium supplemented with 0.2 mg/l naphthalene acetic acid (NAA) and 0.2 g/l active charcoal showed the best results in *in-vitro* regeneration of root system (Figure 2).

In combination with the purple NPK and purple NPK + Atonik sprays at 10-day intervals, the black peat-moss substrate gave the best result of transplanting, 97.7 and 98.3 % survival of *in-vitro* derived plantlets, respectively, in the net-house nursery.

Figure 2. Root number/plantlet cultured on MS mediem with different level of NAA and IBA