

 **O.37 - Physical control of weeds, pests and diseases**

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Reduction of the number of approved and effective pesticides, especially in minor crops, and drawbacks to the control of weeds, pests and diseases in organic production, triggers innovation in physical control. In weed control recent developments aim at increasing capacity and accuracy in mechanical inter-row and intra-row weed control. Other possibilities include the prevention of weeds by soil covers or by applying clean compost in the crop rows. For insect control the "Beetle Eater" a Canadian "vacuum cleaner", developed to suck up Colorado beetles, is tested for use against the carrot fly and adult cabbage white flies. Reflecting soil covers or coverage of the soil between the crops with other plants can be also quite effective. For disease control the usage of UVc light is used for the control of *Botrytis* in greenhouses. The effectiveness of a specifically designed machine of Cleanlight and Dubex is investigated for phytophthora in potatoes and downy mildew in onions. Hot water treatment of the onion sets is another solution developed for downy mildew. The innovations in sensing and ways of actuation in f.e. physical weed control can be made valuable for pest and disease control. Innovation in burners increases the possibilities for selective usage not only for weeds but also for selectively controlled diseased plant material. Usage herb covers to confuse insects can be made more applicable for practice with the no till weed control machinery. Interaction between specialists in several disciplines and further research is needed and can further boost the possibilities for physical control.