

Scientists at Agriculture Canada's research station in Lethbridge, Alberta, have developed a number of sex pheromones, or attractants, for insect pests such as cutworms. These pheromones are specific for a particular pest species and attract the adult male moths. Entomologists are already using the pheromones on an experimental basis for monitoring cutworm population in several areas of Alberta. Traps "baited" with the sex attractant are used to determine the size of the adult moth populations. The scientists can then estimate the number of cutworm larvae that may subsequently attack crops. Collections made in 1979 for army cutworms and bertha armyworms in southern Alberta indicated an increase in both pests, and last year some local infestations reached alarming proportions but the scientists were able to anticipate these outbreaks from their surveys and to recommend timely action to control them with insecticides.

Similar success was achieved in the battle against the codling moth, which is a serious orchard pest in Canada. Studies in southern Ontario, undertaken in cooperation with the Ontario Ministry of Agriculture and Food, showed that the amount of chemical spray applied to apple orchards could be reduced by as much as 40 percent. Ontario producers have saved an estimated \$ 200 per hectare by using integrated pest management systems. Experiments on codling moth control are also being conducted in the Okanagan Valley in British Columbia, by the Summerland Research Station.

A number of countries are becoming involved in pheromone research. In an experiment in Mexico, cotton producers have permeated the air with a synthetic sex attractant, confusing the male pink bollworm and making it hard for the male to find the female for mating. The International Development Research Centre, a Canadian based organization which promotes research and development in the Third World, has supported several projects for biological pest control in the Carriibbean. Through this kind of international cooperation, farmers in many countries will be able to save money on insecticides without losing ground against pests, and will also be able to reduce the amount of chemicals put into the environment.

UN RADAR CONTRE LES GLACES DE MER

Avec le développement du Nord canadien, des navires tentent en plus grand nombre de se frayer un chemin à travers les glaces de l'Arctique, ce qui conduira à l'extension des périodes de navigation. Or l'allongement de la saison dépend d'une meilleure connaissance de la nature de la glace au printemps, afin d'avancer la date d'ouverture de la navigation, et dans les dernières semaines de l'automne afin de retarder la date de fermeture. Il serait donc d'une grande utilité de pouvoir évaluer rapidement l'épaisseur et l'âge de la couche de glace, qui déterminent sa résistance et qui sont très variables à ces deux époques de l'année.

Dans l'état actuel des choses, les observations qu'on peut faire ont un caractère général. Elles permettent surtout de détecter les failles dans la couche de glace et de repérer les routes possibles pour les gros brise-glace. Des radars montés sur hélicoptère peuvent indiquer les points où la glace ne peut pas être brisée, mais ils ne renseignent pas sur ceux où elle peut l'être assez facilement.