Bandits on wings steal or damage millions of tonnes of grain annually throughout the developing world. Dislodging the bird pests from their ecological niche has proven very difficult.
figures are typical of a crop raid by birds: Some fields will be nearly devastated, while neighbouring plots are left untouched. Often farmers will be so discouraged that the crop is simply abandoned.

A multidisciplinary pest management study team, commissioned by the U.S. Agency for International Development (USAID) in the early 1970s, estimated that annual devastation ranged from millions of dollars of losses of food crops in the Sudan to complete losses in certain valleys of Senegal. The researchers concluded that bird depredation is the most serious plant protection problem in the African savannah. Crop losses intensify a food crisis already created by drought and a general lack of available food.

Control strategies have been largely unsuccessful. Traditional methods usually rely on scaring birds. However, scarecrows of various types serve only to lull human caretakers into complacency. The birds soon get used to such devices. Active human guards armed with noisemakers can protect small fields quite well, but often end up merely deflecting the birds to neighbouring crop stands.

Large-scale population reduction has been attempted in many developing countries by massive application of powerful avicides. But these have largely proven to be expensive exercises in futility. Worse, they pose potential dangers to human health. One popular means of destroying bird pests is to spray them with potent skin-penetrating organophosphorous poisons. Large amounts of these persistent chemicals are sprayed from helicopters or light airplanes. Not only is the present chemical control costly and environmentally unacceptable, but in most cases it is not making a major impact on bird populations.

Considering that breeding colonies of quelea in southern Africa can lie anywhere within a six million km² zone, the impossibility of proper control, for economic, logistical, and political reasons becomes obvious. At any rate, it is extremely likely that another granivore would simply take the place of quelea the moment that biological niche opened up.

The wisest course is to avoid these powerful poisons altogether and look for alternative means of reducing crop loss.

Making the plant tolerant to bird attack is an approach scientists at the International Crops Research Institute for the Semi-Arid Tropics in Hyderabad, India, are using with sorghum. Their aim is to select strains with seed types less desirable to birds. Some rice varieties also have flag leaves above the normal leaf canopy that act as "scarecrows," reducing bird damage. But plant breeders cannot combine all the most desirable characteristics in a single strain, and bird resistance may be paid for by decreased yields or longer growing times.

One promising technique is the alteration of cropping patterns. The principle is prevention rather than a drastic cure: If crops are made to mature and are reaped — before the migratory birds come around — crop loss would be minimized. Experiments performed in West Africa have proven the effectiveness of this method. At the same farm in Cameroon cited earlier, crop loss was reduced to one percent.

But the technique is not without its problems. It is difficult to alter crop maturation times. This usually necessitates a genetic reprogramming of the crop — a costly, time-consuming exercise. Also, locally resident birds will feed on crops whenever they become available. Imponderables such as variations in climate and unusual movements of birds can spell disaster in such a finely tuned system. Nevertheless, alteration of cropping systems appears to be the most effective and least destructive method so far devised to prevent crop losses to bird pests.

The USAID pest management study team recommended that highest priority be given to developing appropriate control mechanisms for bird pests. Yet no satisfactory methods have been developed to date. "Multilateral programs of research and education represent the only reasonable approach to the development of an effective program," say the researchers. And as Dr. G.E. Guyer, a member of the team pointed out, until bird depredation is brought under control, the effectiveness of many of the programs associated with the "green revolution" to increase crop production will suffer.

Charlis Appuhamy and his fellow farmers throughout the developing world would certainly welcome the development of effective techniques to rid their fields of "vee kurullo" and other bird pests. That these techniques be environmentally safe and pave the way to increased food production would be a bonus for everyone.