

Abrupt ban of 4 seed treatment chemicals could spell doom



RAM KAUNDINYA,
Director General,
Federation of Seed
Industry of India

A 10-year strategic plan of bringing down the tox profile of the pool of pesticides we use may have to be commonly agreed by all the stakeholders together, especially for seed treatment chemicals. The seed industry and the farmers would look forward to such a dialogue taking place soon.

As food safety gains prominence and chemical residues in food are coming under greater focus, it is important to phase out the old, toxic pesticides and bring in more modern crop protection products into the country, which are safer for the environment, humans and animal health.

Phasing out is a gradual process and could be over a defined period of time. A gradual process makes it possible to offer alternatives to farmers so that their cultivation and agricultural productivity is not adversely affected.

In this context, the Draft Order that was released through a Gazette Notification dated May 18, proposing to ban 27 pesticides has come as a shock to farmers and to the pesticide and seed industries, alike.

Pesticides are classified based on the level of toxicity. Each pesticide is given a particular colour triangle, which is printed on the pack so that the farmer is aware of the tox category of the product he is buying. Red triangle products are the most toxic ones followed by Yellow, Blue and Green triangles in the descending order of toxicity. The list has three Red triangle products, which might be classified as most hazardous by World Health Organisation (WHO). But all are not in that category.

Some of the products in the 27 listed in the notification are used for treating seeds by seed companies before selling them to the farmers. It is important to protect seeds from soil borne and seed borne microorganisms like fungi, bacteria and viruses using seed treatment.

According to industry estimates, the seed treatment market in India is estimated to be around Rs 350 crore and is growing at a rate of 10 per cent per annum. Carbendazim and mancozeb,



together, constitute about 16 per cent of this market. This is followed by thiomethaxam and imidacloprid at 9 per cent each and metalaxyl around 4 per cent share. Carboxin, thiram and deltamethrin are the other products used for seed treatment. All these products bear Green, Blue and Yellow triangle, which means that they are less toxic.

Fungicides such as thiram, carbendazim and mancozeb and the insecticide deltamethrin feature in this list of 27 products proposed to be banned. All these are extensively used in seed treatment. Deltamethrin is a product of choice in controlling stored grain pests and field pests.

Thiram, a contact fungicide, is registered in India in several formulations like thiram 75% WS, thiram 40% FS or in combination with carboxin. It is approved for use on cotton, rice, groundnut, wheat, maize, barley, sorghum, potato and pigeonpea. Thiram is approved against several diseases like 'seedling blight', 'collar rot', 'karnal bunt', 'leaf stripe', 'loose smut', 'bacterial blight', 'root rot', 'stem rot', 'seed rot' and 'fusarium wilt' on various crops. The cost of application of thiram is the lowest among fungicides, around 50 paise per kg or Rs 3 to 20 per acre for rice. There are no other fungicides available at that price.

Deltamethrin 2.5% WDP is used in seed treatment to control soil-borne insects from damaging the seed in the growth stages and the plants in the early stages of growth. It is used on a wide variety of field crops and vegetables. The cost of treatment is around four paise per kg or below Rs 3 per acre in OP rice.

Carbendazim 50% WP and mancozeb 75% WP, separately or as a combination fungicide (carbendazim 12% + mancozeb 63% WP), is very economical and effective on a wide variety of crops, costing up to Rs 25 to 40 per acre of rice.

Alternate chemicals may be technically available, but, they should be affordable and also should fit into the schedule of using multiple modes of action to avoid resistance development. Farmers should not suffer due to exorbitant increase in the cost of cultivation.

Almost 100 per cent of seeds of cotton, millets, mustard, hybrid rice and hybrid maize are treated by seed companies. On-farm treatment by farmers is catching up mostly on broad acre crops like wheat, soya bean and rice to some extent. Here, both carbendazim and

mancozeb, either singly or in combination, are used.

Seed treatment is carried out in factories of seed companies by experienced operators, who take all precautions while handling seed treatment chemicals. These chemicals are not handled by the farmers in the field. To that extent, it is a controlled use with less chances of exposure.

Seed treatment, involves a small cost, which prevents large scale damage caused by pests and diseases. Seed treatment is more efficient than subsequent foliar sprays as it uses only 25 per cent of the active ingredient of pesticides, which might be required to be used later if the seed is not treated. There is also exposure for the operator in the farm and there are negligible residues in final crop produce. As the risk is minimal, banning such products is not recommended.

The government wants to increase seed treatment across 100 per cent of the acreages. The number of products approved for seed treatment is very less and hence any ban will seriously reduce the choice for the seed industry and the farmers. This needs a careful consideration.

Banning a product cannot depend upon it being banned in some other country as India has different political and socio-economic factors. For example, banning of deltamethrin in Saudi Arabia or carbendazim in Cambodia, Fiji, Oman, Saudi Arabia and Vietnam has no relevance for India. We need to take our own decisions.

This is not to say that human and animal safety are not important. Cost considerations cannot override safety considerations. However, we need to take a phased approach instead of a sudden death approach to some of these seed treatment chemicals, which have been in use for decades.

It is more complex than just being a technical or a regulatory decision. It is a decision, which, perhaps, should be taken jointly by the regulators, economists, academia, farmers organizations and industry. A ten-year strategic plan of bringing down the tox profile of the pool of pesticides we use may have to be commonly agreed by all the stakeholders together, especially for seed treatment chemicals. The seed industry and the farmers would look forward to such a dialogue taking place soon. AS