Pesticide Poisoning —Two Case Histories

By LYNN GRIFFITH

Part of working as an agricultural consultant and laboratory representative involves dealing with farmers, growers, and superintendents on a one to one basis, every day. Dealing with these agricultural professionals in such an intimate manner gives you insight into grower's thought, experience and opinions on a number of things. This year two of my clients developed pesticide poisoning in separate incidents. The nature of their experiences and their similarities is quite startling, as is the way the poisoning affected their outlook on chemicals, agriculture, and the environment.

The victims were both educated, experienced people, one a grower/manager, one a farm owner. The chemicals were different, but both were granular organophosphates. One victim worked in a wholesale nursery, the other in commercial turf. Both were more than happy to consent to interviews, and were glad that someone was telling their story in a professional, agriculturalist manner without media sensationalism. For the sake on anonymity, I will call the victim John #1 and John #2.

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- Golf course superintendents should screen job applicants for allergies (people who are allergic to one type of insect venom are often allergic to others).

- A golf course superintendent should familiarize himself with those golfers who are allergic to insect venom and who are members of, or regularly play, the golf course where he is employed.

Since there are so few individuals who are allergic to insect venom, it is unlikely that golf course personnel will ever have to deal with a crisis such as the hypothetical Jim presented. But because the potential is present, the individual who can recognize the symptoms and act swiftly may save a life. ■

Early one morning, John #1 was applying a granular pesticide to container nursery plants. It was hot, and there was little ventilation. He was wearing rubber gloves and a spray mask, but no arm cover. Apparently the material was absorbed through the skin on John's arms.

About 15 minutes after application, he started feeling nauseous, followed by profuse sweating and stomach cramps. Partial loss of vision occurred, followed by severe vomiting and diarrhea. The stomach cramps left him doubled over, virtually unable to move.

Other staff members called an ambulance. Upon arrival, the paramedics removed all of John's clothing and hosed him down. They took a bag of the chemical with them, and headed for the hospital. John remembers the paramedics talking to him, asking him questions, but he was unable to speak or respond. They gave John injections in the ambulance, but there was not enough time to get to the hospital from the rural nursery location. Another ambulance had to meet them with a heart-lung machine to keep John's heart beating, because otherwise he probably wouldn't have lived.

John #1 arrived at the hospital and was placed immediately in intensive care, still on a heart-lung machine. The injection began to work, and John started to perk up. A staff member would check on him every few minutes to keep him awake and talking. They also frequently had him blow into a machine to measure lung capacity.

For the four days John #1 was in the hospital, the symptoms came and went. He remembers feeling severe tension, anxiety, and having a very short temper and paranoia. It took two weeks for John to feel good. Now, six months later, he's pretty well over it, but he still is acutely aware of his condition, and still suffers occasional headaches and short temper. John said, "Even talking to you about it now, I'm getting a headache."

The doctors say the symptoms could linger for thirty days or thirty years, depending on his particular chemistry. Today John says the poisoning has a big psychological effect on him. He thinks a lot, and questions the value of what he is doing. He feels angry that the whole thing happened, and has thought of quitting agriculture as a profession. John is no big environmentalist, but he favors education in pesticide use, and alternatives to agricultural chemicals.

John #2's story is somewhat different, but similar in some surprising ways.

About a month ago, John #2 was calibrating his spreader, preparing to apply a granular material to his commercial turf. He normally takes precautions and uses gloves and a mask, but he was only calibrating the machine and the gloves and mask were in the shed, a few hundred yards away. So he picked up the opened bag, and dumped the contents into the hopper. It was slightly windy, and the powder fluffed up as he poured. A small cloud of pesticide powder formed over the hopper, briefly covering his face, chest, and arms. John #2 coughed once or twice,

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fanned away the cloud, and proceeded to calibrate the spreader.

Afterward, he went home, took a shower, had dinner, all the usual after-work activities, and felt fine. About midnight, however, he woke up with a severe headache and severe perspiration. This turned into "the shakes," and he felt the room start to spin around. Then John #2 felt alternately hot and sweaty, and then very cold. During the cold period, no amount of blankets could keep him warm.

A while later, John #2 settled down a little, and got up to look up pesticide poisoning in a farm chemicals book. Seeing the symptoms in the book were similar to his, he asked his wife to take him out to the farm, as he couldn't drive in his condition. He wanted to see what type of chemical this was, because he had never used it before. But before they got too far, the dizziness, sweating, and shakes returned, and John #2 told his wife to take him to the hospital.

Upon arrival, John had trouble convincing the staff of his problem. "How do you know you're poisoned?" they asked. One doctor told him he was just getting a bad cold, but John persisted, and another doctor was summoned, one who had experience in pesticide poisoning. After detailed discussion, including a call to the pesticide manufacturer, the doctor finally agreed that it *was* pesticide poisoning. John #2 was given antidotal injections, and kept for observation overnight.

In the morning he was released, and given a prescription to combat the symptoms. John #2 felt fairly good during the day, but every night the dizziness and sweating returned, as did the muscle spasms. The pills helped some, but he has not had a good night's sleep in the month since the incident. The seizures would last all night early on, but now they only go on for about two hours.

About two weeks later, John #2 drove his truck to the area where he had applied the material, and as soon as he got to the area, the attacks started. Later that week, he drove the tractor with the spreader that had contained the chemical, and again felt the dizziness and perspiration begin. As John was recounting the story to me, he began to perspire and salivate, and his eyes had a funny look to them, with constricted pupils. He says that even thinking about it can bring on the seizures.

John #2 told me that if he had to use the chemical to grow grass, then he would sell the farm. He got rid of the spreader and his clothes, and purchased a $400 protective suit with mask, gloves, boots, the works. John will still not venture into the field where the material was applied, and he will not set foot on any golf course.

The type of pesticide poisoning which John #1 and John #2 suffered was organophosphate poisoning. This class of chemical (and also many others) can affect the transmission of nerve impulses, resulting in a broad range of symptom types, including, as John #1 and John #2 put it, "losing control of your body." If the nerve impulses are interrupted enough, the brain can't tell the heart to beat or the lungs to breathe, and death results.

As a consultant, I recommend agricultural chemicals every day. Like most of you, I try to respect the benefit from the use of chemcials, and to respect the environment as well. Why did I write this article? Not to scare, nor no alarm, nor preach. These guys who had this problem had worked in agriculture and had used chemcials for years. They are guys working and making a living in agriculture just like you. Pesticide poisoning can happen to anybody. It happened to these guys, and it can happen to you, easier than you think. Be careful, respect these materials, use your head, and encourage those who work for you to do the same. ■

New St. Augustine Variety To Be Released

By HAROLD JONES

A new variety of St. Augustinegrass developed by plant breeders at the Institute of Food and Agricultural Sciences, University of Florida.

'Floralawn" St. Augustine is resistant to St. Augustine decline virus, southern chinch bugs, and downy mildew. It is tolerant to sod webworms under low fertility.

Like "Floratam" it is equally coarse in leaf texture and stolon texture and is sensitive to winter injury, although no winter injury has been observed to date in Florida. It is very similar to 'Floratam' in its shade of tolerance and will not take as much as shade as "Floratine".

A major advantage of this grass is that it can be distinguished from other varieties of St. Augustinegrass by alcohol dehydrogenase, electrophoretic banding patterns and mophological characteristics.

There are so many questions as to whether or not a consumer has gotten the "Floratam' they paid for and this grass may help us reduce this problem.

This new variety has not been released to the sod growers and will probably not really be available for planting for at least 18 to 24 months.

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We hope the information in this newsletter will help you have the grass which is greener on The Other Side. Suggestions regarding the content or format of this newsletter are welcome. ■