

“IT’S HARD TO NAVIGATE ALL THOSE ‘MIRACULOUS PREPARATIONS’ ”



Marijan Balić started growing garlic in his native village in eastern Croatia, not far from the border with Serbia. In just ten years, he became the leading garlic producer in the country.

IT HAS BEEN TEN YEARS since I started growing garlic. Right at the beginning of my journey, I began trying out different methods to reduce pesticide use. The reason was very simple – I didn’t like the way it was being done back then. I studied a lot of literature and very quickly realized that if we continued at the same pace, using so many pesticides, I was heading for disaster. Pests and weeds were becoming more and more resistant, and the soil increasingly depleted. I make my living from the land – soil pollution is the last thing I want! That’s why I decided to change the way I work, turn to sustainable agricultural production, and aim for G.A.P. certification (Good Agricultural Practices) – an international framework that defines responsible agro-technical measures in farming.

Like any major change, it wasn’t easy. I probably jumped in too quickly, which initially caused a drop in production. Other changes, however, took a lot of time. I mostly work alone and I’m not a scientist – I’m not a laboratory person! Still, I carried out most of the research and experiments myself, as best I could, reading and making do with the resources I had. I experimented with fungal and bacterial products as pesticide alternatives, with mixed results. When resources are limited, it’s hard to tell whether good outcomes come from the new methods or simply from favourable weather conditions. Despite all the difficulties – gathering and analysing data, managing the farm, and competing with cheap Chinese garlic – I still managed to introduce some changes. I looked for new equipment to help control weeds so I could use less herbicide. I now operate a special machine with a mechanical arm that pulls weeds using small claws, imported from Germany. It is very effective and works particularly well for garlic, so much so that I plan to buy a second one.

However, I haven’t solved every problem. My greatest challenge is onion flies – *Delia antiqua* and *Helomyza lurida* – which attack young garlic heads and cause rapid rot. In some years, we lose as

much as ten percent of our yield, a huge blow to our sector. Until recently, we could control these pests with a highly effective insecticide costing just twenty euros per hectare, but it was banned a few years ago. Since then, I’ve tried many approaches: crop rotation, monitoring, various planting schedules, but I still haven’t found – and probably don’t have the resources to find – an equally effective solution.

My next problem is caused by the mite *Aceria tulipae*. Similar to the onion fly, it can attack young plants, but it causes the most trouble later, after harvest, while the garlic is drying. At that stage, it develops quickly beneath the garlic skin, feeding on its flesh. The bulb then completely dries out, resulting in a total loss of yield. *A. tulipae* also encourages the development of the fungus *Fusarium*, which can rot the bulbs within just a few weeks and potentially cause total disaster. I still haven’t found a satisfying non-chemical way to deal with this mite, and maybe one exists, but I’m not aware of it. Even so, I haven’t given up. Even with ten

years of experience, I know I’ve barely scratched the surface of techniques yet to be discovered.

I believe my biggest challenge is the lack of information. I’ve tried to gather as much knowledge as possible from abroad through friends and colleagues,

but every situation, especially regarding climate and local conditions, is unique. Furthermore, as more farmers attempt to change their practices and more buyers and institutions request reduced pesticide use, the market has been flooded with a wide range of so-called ‘miraculous remedies’. Some companies, seeing a chance for profit, try to sell us whatever they can, promising quick fixes for all our problems. For us, it’s hard to evaluate what is truly worth trying. We need help, time, and direction.

What I regret most is the lack of connection and collaboration among Croatian producers, particularly between research institutions and the agricultural sector. As producers, we still don’t have access to all the information or alternatives necessary to maintain current production levels while drastically reducing pesticide use. This is a massive challenge. But I honestly believe that through collaboration – sharing knowledge and the latest research – we can succeed. Together.

Conversation with LOU HÉLIOT

Illustration Stéphane Trapier

“I didn't like how it was done back then”