

Spawn production in Iran

Belgian spawn manufacturer Mycelia, present at the Mushroom Days in stand 13, has been paying increasing attention over the past two years to designing and setting up spawn laboratories- alongside its normal core activities. Training and troubleshooting relating to spawn production worldwide are also playing a more important role in their activities. Mycelia's Magda Verfaillie recently travelled to Teheran on invitation of the Iranian mushroom grower's association. Together with Prof. Joris Hoozee of the Katholieke Hogeschool Sint-Lieven in Belgium, specialist in mycelium production, and Jos Van de Ponsele from SACO2 (producers of Microsacs for mycelium production) she gave a series of classes about mycelium production at the Ministry of Agriculture.

About two years ago we met the chairman of the Iranian mushroom grower's association, Mr. Mohammad Entessari from Sadaf Mushrooms, a representative of the Iranian Ministry of Agriculture, Mr. Ali Arjmandi and a number of growers at the last edition of the Mushrooms Days in Den Bosch. After a fascinating discussion, they invited us to come to Iran to give a series of courses about mycelium production. There were two reasons. Mushrooms have been successfully cultivated for years

in Iran for the domestic market. An article about these activities appeared in the first edition of Mushroom Business. Growers in Iran are faced with strict import restrictions: only items that cannot be produced in Iran may be imported. For this reason, certain mushroom growers also have their own spawn laboratories - from a hygiene point of view not an obvious combination! They are well aware that absolutely nothing may go wrong in this first stage of the cultivation cycle - otherwise the entire production will be jeopardised.

Iran also has very extreme climatic conditions: in the south temperatures can rise to 50 degrees Celsius while in the north -30 degrees is measured. Both climates have specific spawn-related problems

Following intuition

We left for a week, fully loaded with course material and practical knowledge. On the first day a visit was planned to a number of growers annex spawn laboratories. This gave us an idea of how mushroom growing takes place in Iran and if there were any specific problems that could be linked to spawn quality. During our visit to two working spawn laboratories, we compiled a list of questions and remarks that we intended to handle during our course in the coming days.

Our impression of the local approach to mushroom growing was far from negative. Taking into account the lack of information available about how to organise a commercial spawn laboratory, the growers had intuitively made many of the right decisions. Certain important rules weren't taken into consideration, or incorrectly interpreted due to lack of

experience. This mainly concerned behaviour and general hygiene during the production process.

Attentive audience

Two days were filled by a course about applied microbiology, attended by around 30 researchers and farm managers, from all corners of the country. The participants had submitted their questions beforehand. We have never instructed such an attentive and interested audience before! We were also pleasantly surprised by the (often university) levels of education of the participants. They asked very critical and relevant questions, and our answers translated into



Mr. Mohammad Entessari.



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A mosque in Isfahan at sunset.



Laboratory laminar airflow cabinet.



Photo's: Mycelia



Farsi (Persian) were noted down from right to left.

The purely theoretical sessions addressed subjects such as the micro-biological aspects of mycelium production and drawing up guidelines and regulations for Good Manufacturing Practice (GMP),

but the lessons were mainly aimed at practical information that could be implemented immediately. We explained in detail the various stages of production: multiplying and storing mother cultures, preparing nutrient mediums, carrying out various stages of production efficiently and using our sterilisable and breathing Microsac.

We also discussed the (re)organisation of rooms and zones for a correctly functioning spawn laboratory, sterilisation techniques and the technical aspects of creating over pressure. The programme of lessons was very intensive - from 7 o'clock in the morning until 7 at night. Luckily we were able to take a breather while the interpreter was translating. Never the less, we had the impression that all the participants were very satisfied.

Friendly Iran

After the sessions were finished, we travelled around accompanied by Mr. Ali Arjmandi of the

Group photo. Third from left: Ali Arjmandi, fifth from left: Joris Hoozee; middle: Magda Verfaillie with Jos Van de Pongseele to her right.

Ministry of Agriculture. Iran is a spectacular country fed by the Tigris and Euphrates rivers. The Persian Empire was an important and highly developed culture. Iran is home to the evocatively named cities of Persepolis and Isfahan. All the sights were open to visitors, but there were hardly any foreign tourists. The Iranians gave us a very warm welcome and showered us with friendliness and hospitality. The Ministry of Agriculture is now considering organising an international congress about mushroom growing. This seems an excellent idea and a good opportunity to show the world just how far Iran has progressed with commercial mushroom cultivation. As we will also have a role to play at this congress, a return to Iran seems inevitable - a journey we will undertake with the greatest of pleasure!



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