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Conducted by: Oregon State University Seed Laboratory, Corvallis, Oregon July 2015

The goal of these initial germination tests was to investigate if the water structured by the VFT infusion process might increase germination rate of old seeds. Tests were being carried out at the OSU Seed Lab.

Old seeds of rice and onion (5-7 years old) were selected, divided into five groups, and watered with infused water diluted by unprocessed water in different proportions as 100%, 10%, 1%, 0.1%, 0.01%. The data was collected on the 7th and 14th day of the germination test. The best results for the seeds' germination, both for rice and onion, were received with a concentration of 0.1%.

Table 1 presents the results of old onion seed germination. The first count was done on the 7th day and the final count was on the 14th day after onion seeds were planted. Watering the seeds using 0.1% structured water produced an increased germination rate of up to 164 percent.

Substance used	Initial amount	First count	Final count	Comp. to control %
Control water	99	22	28	
Infused water	95	32	44	164

Table 1. Influence of 0.1% infused water on old onion seed germination.

Table 2 presents the results of old rice seed germination. Watering the seeds using 0.1% infused water returned an increase in germination rate of up to 193 percent.

Substance used	Initial amount	First count	Final count	Comp. to control %
Control water	99	9	14	
Infused water	99	21	27	193

Table 2. Influence of 0.1% structured water on old rice seed germination.

These initial tests revealed that water infused via the VFT process might significantly influence the growth rate of old seeds both for rice and onion, and dilution proportion is an essential factor that must be studied for best result.