

*Dr Annalien Dalton with the right food to help children become more astute – a paste made from the heads of stockfish on bread.*



## Fish heads are good for children

Research has proven that the consumption of stockfish heads has helped children improve their short-term memory, their ability to spell, as well as reduce classroom absenteeism because of a boost to their immune systems.

Dr Annalien Dalton of the Unit for Dietary Illnesses at the Medical Research Council developed a stockfish head fish paste, to be enjoyed on bread, as part of her doctoral thesis. She received her PhD in Food Science from the Faculty of AgriSciences at the April graduation.

Strict microbiological testing was conducted during the production of the paste to ensure it was safe for human consumption. Sensory tests showed that it was flavourful and that the children enjoyed it.

In a controlled study this paste on bread was given to Grade 1 and 2 learners in a Northern Cape town over a period of 104 school days. Blood samples were taken from the children before and after the study and standardised tests to determine their short-term memory, spelling, reading, recognitory skills and discriminatory ability were recorded.

The tests among the experimental group of learners revealed an improvement in their cognitive skills and they had a lower rate of absenteeism as a result of an improvement in their immune systems. An increase in the omega-3 long-chain polyunsaturated fatty acid levels was also noted among the target group.

According to Dr Dalton it is vital to have both omega-3 and omega-6 fatty acids, but in the right proportions, in the human body. Ideally there should be one omega-3 fatty acid to approximately four omega-6 fatty acids.

Unhealthy Western eating habits, as well as malnutrition in poor rural areas, result in an imbalance in the two classes of fatty acid, which leads to malfunction in certain biological processes in the body.

She stated that processed foods and the excessive use of cooking oils such as those derived from sunflowers were the major perpetrators in the Western diet that led to this imbalance. Research in the United States of America showed that the imbalance was as high as 1:40.

"It is terrible to think that such a rich source of amongst other omega-3 is being wasted. A fish meal made from the heads of the fish can be successfully used to enhance existing school feeding programmes. It can also be of invaluable help to HIV patients who specifically experience problems with their immune systems," said Dalton.

This fish meal can be used in various products, such as in a sauce on maize meal, bread or rice.

Dalton said the government and possibly the Department of Education should seriously investigate the use of fish heads as a cheap food source, which can also be a rich supply of protein, calcium and the long-chain polyunsaturated omega-3 fatty acids EPA and DHA. m

## US se melkkudde onder die room

Die Universiteit se melkkudde tel onder die room van die Wes-Kaapse suiwelbedryf. Die US het onlangs 'n silwertoekenning van die Wes-Kaapse Meestersuivelboervereniging gekry vir sy melkkudde, wat vir navorsing en die opleiding van veekunde-studente gebruik word.

Volgens mnr Hendrik de Waal van die meestersuivelboervereniging het slegs ses van die 260 boere wat aan die Melkaantekeningsskema in die Wes-Kaap deelneem, vanjaar silwermedaljes ontvang.

Volgens hom is die doel van die kompetisie om erkenning aan topboere te gee vir hul bydrae tot die suiwelbedryf. "Nie alleen dra hierdie boere by tot melkproduksie nie, maar ook tot die verbetering van genetiese materiaal," verduidelik hy.

Die kompetisie is op 'n wetenskaplike basis geformuleer en verskillende formules is vir die verskillende rasse uitgewerk. Formules neem die getal laktasies wat in die toetsjaar voltooi is, die gemiddelde melkproduksie, bottervetpersentasie, proteïenpersentasie asook die kalfinterval in ag. Daar word vir elke kudde, volgens ras, 'n randwaarde-indeks bereken.

Volgens mnr Ivan Stevens, bestuurder van die Fakulteit



*Ivan Stevens, bestuurder van die Fakulteit AgriWetenskappe se Welgevallen proefplaas.*

AgriWetenskappe se Welgevallen proefplaas, het hulle in 1973 met die verbetering van hul eie kudde begin. Die kudde bestaan tans uit 55 Frieskoeie in melk, waarvan die top 14 koeie gemiddeld 51 liter melk per dag lewer. m