

A HEALTHIER DIET IN LOW-INCOME COUNTRIES

‘Invest in leafy vegetables’

People in low-income countries don’t consume enough fruit and vegetables. A major Wageningen study recommends investing in the production of green leafy vegetables near the cities as one of the most effective solutions to that problem. ‘A focus on green leafy vegetables can turn things around on several fronts.’

TEKST MARIEKE ROTMAN PHOTO GETTY IMAGES

In the Netherlands, people don’t eat enough fruit and vegetables because of the wrong dietary choices, but in many middle- and low-income countries, the same problem is caused by a shortage of affordable healthy food. The Bill & Melinda Gates Foundation wants to help solve this problem, and so it went in search of the most promising projects to invest in. But the Foundation stumbled upon a fundamental problem: very little was known about fruit and vegetable consumption in these kinds of countries. It was not clear what the source of the problem is, nor which interventions work and which don’t.

So the Foundation asked researchers at Wageningen University & Research to investigate this, and the Global Fruits and Vegetables Scoping Study was set up, led by Bart de Steenhuijsen Piters, a senior food systems researcher in Wageningen. ‘Many previous studies had a technological approach; a lot of attention has always been paid to crop varieties and to breeding to optimize production,’ explains De Steenhuijsen Piters. ‘But there are other dimensions to the food problem as well, such as the health effects of foods, social aspects and gender roles.’

An interdisciplinary team of scientists who work on nutrition, plants, gender, inclusivity and economics designed a large-scale study.

BIG GAPS

Just like the Gates Foundation, the team was immediately confronted with big gaps in knowledge about fruit and vegetables in the food systems of low- and middle-income countries. So the researchers spent a year and a half studying global trends in fruit and vegetable consumption, trade and production. They also examined the food system from production to consumption in seven >



low- and middle-income countries: Nigeria, Tanzania, Ethiopia, Burkina Faso, India, Nepal and Bangladesh.

The Wageningen researchers would have liked to visit these countries themselves, but Covid-19 threw a spanner in the works. De Steenhuijsen Piters and his team therefore collaborated closely with local researchers and consultants in each country, who took on the actual research work.

Various types of crops were studied in each country, depending on the local diet and regional production. In Tanzania, for instance, the study focused on oranges, aubergines and amaranth leaves; in Nepal on kiwis, mustard leaves, and varieties of pumpkin. The researchers found out what literature and data were available, such as production figures from the horticulture sector and local market prices. None of the seven coun-

tries had up-to-date information on people's daily consumption of fruit and vegetables, so investigating and documenting that became an important objective of the research. Also, nearly 100 experts on fruit and vegetable production and supply chains from both the public and the private sectors were interviewed. And focus group discussions were held in every country, with local entrepreneurs, consumers, government representatives and development organizations. These focus groups helped the team to chart local developments on the food market and to un-

derstand the context in which particular types of fruit and vegetable are eaten. In India, for example, green leafy vegetables grow abundantly in the wild, making them free healthy food. But it became clear through the focus groups that Indian consumers see these vegetables as food for poor people and therefore make very little use of them.

TOO EXPENSIVE

In many of the countries, a healthy diet with an adequate intake of fruit and vegetables was found to be too expensive for more than three quarters of the population. In Ethiopia, for instance, a healthy diet costs nearly one third of people's income. As a result, Ethiopians eat an average of only 55 grams of fruit and vegetables per day, less than 15 per cent of the WHO-recommended 400 grams. But even people in higher income groups

relatively little nutritional value.

The reason tomatoes and onions are popular is that they are easy to transport and fetch relatively good prices. But if you want to improve the health of the population, you need to look at the nutritional value of crops, says research leader De Steenhuijsen Piters. Government policy and development research were long focused on high-calorie food crops such as grains and rice, and not on fruit and vegetables. When fruit and vegetables were considered, it was mainly in terms of their economic value. 'An important conclusion from our research is that government policy and development programmes should focus less on grains and the most lucrative vegetables to grow. Instead, the focus should switch to the most nutritious kinds of vegetables, and to local production.' This could mean targeting green leafy vegetables such as spinach and amaranth leaves, for example, as well as cruciferous vegetables such as broccoli and sprouts, or orange and yellow vegetables that are rich in vitamin A.

DELICATE

Nutritious green leafy vegetables have received too little attention in food programmes up to now, says De Steenhuijsen Piters. 'The problem is that they are perishable and delicate, so they are not suitable for long-distance transportation.' Traditionally, therefore, leafy vegetables are mainly grown by women for domestic use, and consequently policymakers and development programmes have never taken much notice of them. 'Those programmes are like supertankers: they go full steam ahead in one direction. Changing course takes a lot of energy and conviction.' But a change of course is needed, he believes, because a focus on green leafy vegetables could turn things around on several fronts. 'Besides the essential nutrients they contain, these vegetables are important for women's emancipation.

'If you want to have a real impact on nutrition, you must empower women'

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In low- and middle-income countries, leafy vegetables have traditionally been grown mainly by women for household consumption.

They are often not able to trade in tomatoes and onions because it isn't safe to travel for hours on their own in the trucks that transport them. Nor can they be away from home for that long due to their childcare responsibilities.'

If you work through policies or development programmes to promote the farming of green leafy vegetables near cities for the local market, you kill two birds with one stone, say De Steenhuijsen Piters. 'It solves the problem of the perishability of the vegetables, and it makes it possible for women to combine paid work on the land and trading with their other tasks.'

Improving the position of women is crucial, say the researchers. Women are key actors in the informal supply chains for fruit and vegetables, growing them for their own family's consumption and on a small scale for local markets. This not only helps them become economically independent, but also benefits public health: women influence the diet of the whole family more than men. They can therefore be catalysts for better eating habits. Nutrition expert Brouwer: 'That is a recurring theme in our study: if you really want to have an impact on diet and nutrition, you must focus on the empowerment of women.' There is no shortage of follow-up to the study, says Brouwer. 'The biggest agricultural innovation network in the world, CGIAR,

is gearing its new research programme on sustainable food systems changes and fruit and vegetables to the insights gained from our study. They are focusing on the same countries too.' Brouwer and De Steenhuijsen Piters are involved in writing these research proposals. What is more, new research is being set up at CGIAR on the follow-up questions thrown up by the Global Fruits and Vegetables Scoping Study, such as what the impact of the interventions would be. In all the countries there is a lack of data about household production of fruit and vegetables.

OPEN ARMS

Within the food industry, too, the study provides a good basis for improvements. The Dutch seed company East-West Seed welcomed the study with open arms. 'The shift in emphasis to the nutrients in food is fantastic, in our view,' says public affairs manager Maaikje Groot. 'The study clearly shows that it is important to aim at a variety of vegetables and fruit. We are targeting that by setting up breeding programmes for various local crops such as the African aubergine and amaranth.' Groot sees the importance for health and the economy of investing in the availability of healthy vegetables. 'Our role in that is to improve the quality of crops and their resistance to disease and drought,

so that production goes up and products become more affordable for the consumer.'

The call for more attention to be paid to women interests her too: 'We want to address that in our own programmes in low- and middle-income countries. We are developing dedicated kitchen gardening courses for women, training them in growing vegetables for their own use. This can be the first step towards upscaling production in order to sell their produce.'

De Steenhuijsen Piters: 'At the moment, both ministries and large organizations focussing on food and nutrition security worldwide are drawing up investment plans on the basis of this study. The research provides a new perspective on how investments can make a difference to the supply of healthy food around the world.' ■

www.wur.eu/foodsystemss

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Wageningen Academy is running an online course related to this theme: Food Environments for Healthy Sustainable Diets.

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