2. Church-led Roll-out of Tree Spinach Value-chain

SETTING – EAST COAST

Each local church has its own poor and unemployed youth, who struggle to become economically active because of the unfavourable economic conditions that prevail in South Africa in 2018. In the wider "parish" there are also youth who can participate, even if they are not adherents.

There is no limit to the number of clusters that could be formed, until the market is saturated with the spinach products that they produce. For example, fatayar pasties, spinach rolls, spinach bread, spinach muffins, spinach quiche, etc.

The "value-chain" has four links:

- 1. Farming growing spinach trees, propagating and picking leaves
- 2. Baking into products listed above
- 3. Delivery in a close radius to the bakery, so that products are fresh
- 4. Trading marketing and selling

We do not propose a franchising model. This is a replicable model that can be adapted to local conditions. However, from its campus in the Lowveld of Mpumalanga province, C4L can provide "boot camp" training to get youth started.

Another vital ingredient is mentoring from Christian business women and men who are church members. The importance of this element cannot be overstated. It is mission-critical.

FOCUS

Tree spinach is a succulent plant that is indigenous to Mexico. It grows well under the Lowveld's weather and soil conditions. Other plants originating in Mexico like *agave* and *yuka* have spread all over the world and are ubiquitous in South Africa. They need a hot climate to prosper, and suffer from freezing.

Tree spinach has some amazing properties. It is three times more nutritious than normal spinach. It also has some medicinal qualities that are of particular benefit to diabetics. Best of all for growers, it is a perennial whose leaves can be harvested monthly, all year round. This generates regular income to support regular payment - such as retiring a loan.

The uses of tree spinach leaves include:

- Green leaves can be cooked and eaten (like vegetable spinach)
- Leaves can also be dried and thus stored without refrigeration, after which the dried leaves can be boiled to make relish
- Dry leaves can be crushed into spice format
- Powder can be pressed into tablets (which are in high demand in export markets like Japan)

But the processing that we recommend is baking...

BOMA BAKERY

C4L has pioneered some spinach products, inspired by Spinach King in Capetown.

The products are both delicious and nutritious. They are appreciated by both blacks and whites. One recipe called "Fatayar" is actually Lebanese.

First the stems must be removed from the spinach leaves. Then they are boiled. Then they are mixed in a blender with olive pesta, spekboom leaves, garlic granules, salt and oil.

When the dough is ready and rolled, it is cut into a circle. Then the pie-filling is placed on the dogh and sunflower seeds are sprinkled on. Then it is either rolled or in the case of Fatayar, folded into a triangle. These are then baked in an oven.

A TEAM EFFORT

Bakery products must then be delivered to traders at community level. These may be tuck shops or restaurants. Those marketing and selling the products to end-users can promote both the health and the taste aspects. Spinach rolls also travel very well, as they are robust.

MINIMUM REQUIREMENTS

To employ a team of ten – 2 farming, 2 baking and 6 trading – at least 500 trees will be needed. Of course this depends of variables like rainfall, soil type and how heavy they are picked. You don't need even one hectare for this, as the plant population per-hectare is about 1500. Normally spinach trees are planted in 2-meter squares, but that can be reduced down to 1.5 meters between rows.

From planting to harvesting can take up to one year, depending on the agronomic conditions.

The bakery needs a blender and an oven, plus plenty of countertop space. Plus, of course, hand tools like bowls and a bread roller and cookie sheets for baking.

Some working capital is needed to buy the ingredients. With 500 trees, the bakery should be able to function 6 days a week, year-round. Providing minimum wage for 10 people will require some careful calculations and combinations. But no one needs to be a rocket-scientist to make this value-chain work.

However, some training, mentoring and credit will be needed.

PROSPECTS

A spinach tree will grow over 5 years to 3 meters in height – too high to pick. So if needs to be clipped down annually, providing the cuttings to plant new trees. These should be used to expand the volumes and build up the business. The tree nursery should be "internal" – not a product.

From Durban to Messina, all along the east coast, these clusters should succeed, creating selfemployment for hundreds if not thousands of youth.

Obviously affiliation with a local church means that the bakery can supply to birthday parties, weddings, and funerals. Church members can spread the good news of tree spinach far and wide!