

KEW SCIENCE FESTIVAL AT WAKEHURST 2018

FUTURE FOODS

FEATURING ANCIENT & EMERGING INGREDIENTS, FERMENTS, CONCOCTIONS &
POTIONS

PUTU, CHAKALAKA & AMASI

SOUTH AFRICAN MAIZE PORRAGE WITH SPICY SAUCE
SERVED WITH PROBIOTIC FERMENTED MILK

INJIRA

ETHIOPIAN SOURDOUGH PANCAKES MADE WITH TEFF FLOUR
SERVED WITH SHIRO WAT, STEWED PIGEON PEAS COOKED WITH BERBERE SPICE

JI AKPURAKPU

NIGERIAN STYLE SPICED YAM BALLS
SERVED WITH FRIED OKRA AND PEANUT & PEPPER SAUCE

TIRMIS BA TAHINI

EGYPTIAN STYLE LUPIN BEANS IN SESAME SEED SAUCE
SERVED WITH LEMON SEARED CHARD AND ANCIENT GRAINS SHAMSI BREAD



CHAKALAKA

Chakalaka is a hot sauce or stew hailing from South Africa. The name comes from Fanagolo, a pidgin language used by mining communities in Johannesburg and the dish a real hybrid of cultural flavours.

You can add other vegetables such as squash or brinjal and sweeten it with fruit chutney or cooked fruit.

3 tbsp olive oil
1 onion, finely chopped
6 garlic cloves, crushed
1-2 green chillies, deseeded and chopped
thumb-sized piece ginger, finely grated
2 tbsp hot curry powder
3 peppers of mixed colours, de-seeded and finely chopped
5 large carrots, grated
2 tbsp tomato purée
5 large tomatoes or 400g can chopped tomatoes
1 tbsp piri-piri spice blend
2 tsp dried thyme
400g can haricot beans
1 small bunch chopped coriander
rice

1. Heat the oil in a casserole dish set over a medium heat. Add the onion and cook until soft and starting to caramelise. Stir in the garlic, chillies and half the ginger. Cook for 1-2 mins, then add the curry powder and stir to make a curry paste. If the mixture is starting to catch, add a splash of water to stop it burning.
2. Stir in the peppers and cook for 2 mins more. Add the carrots and stir to make sure they are coated in the curry paste. Stir in the purée, tomatoes, thyme and beans Add 250ml of water and bring to the boil, reduce the heat and simmer for at least 20 mins until the vegetables are tender and the mixture has thickened
3. Add the remaining ginger and season to taste. Sprinkle with coriander and serve hot or cold with rice or mealie pap

PUTU – MEALIE PAP

Maize meal is the staple food of most of Southern Africa. White maize replaced indigenous grains like sorghum and millet during the colonial occupation and Putu or Mielie Pap is the most ubiquitous way of preparing it. It's a stiff porridge cooked with salt akin to polenta. Be warned, you need a strong arm to make good mielie pap. People eat it with savoury dishes such as Chakalaka and grilled or stewed meats. It's also delicious with melted butter and sugar.

250g maize meal
500g water
1 tsp salt
25g butter

1. Bring the water and salt up to a boil in a large, heavy pot and add the maize meal in a steady stream stirring with a strong wooden spoon.
2. Allow this to boil for a few minutes while stirring and then add the butter, turn the heat down low and cook for a further 30 minutes. Ideally you want to stir this as often as you can to stop it catching on the bottom. It will become very stiff, but keep cooking and stirring.
3. Once cooked you can serve it hot or cold. You can also brown off the top under a grill

INJERA

Injera is a member of a family of flatbreads or pancakes found in North East Africa, most notably in Ethiopia, Somalia, Sudan and Eritrea. These spongy textured crepes are made with a variety of grains including, wheat, rice, maize and barley, but Teff, a variety of millet is most prized. You can make instant Injera using baking powder, but the traditional method involved making a batter of flour and water which is seeded with yeast or a sourdough culture and allowed to ferment naturally. This is a basic formula takes up two days to ferment. Makes 8 injera

400g fine milled teff flour

600g water

2g quick yeast or 20g of ripe sourdough starter

5g salt

1. Mix half of the teff flour with the half of the water and yeast or sourdough, cover and leave in a warm place to ferment for 24 hours. The batter should be significantly aerated and smell sour. If extra brown liquid has collected on the top, mix this in well and add the remaining teff flour and water. Mix again, cover and place back in the warm place to ferment for a further 24 hours.
2. Just before you're ready to cook the injera, whisk in the salt and check the consistency, which should pour like single cream. If it feels too thick, add water a little at a time to achieve the consistency.
3. To cook, heat a large non-stick pan or skillet over a medium heat. You will need a lid or bowl large enough to cover the pan. If using a regular pan, brush with a little oil.
4. Pour about 100ml of batter into the pan and swirl round as if you were making crepes or an omelette. If the batter is thicker, use the bottom of a wet or oiled ladle to spread it round the pan in concentric circles.
5. It should start to set and produce little air holes quite quickly. Wait until the surface is covered in these air holes then place the lid over the pan and allow it to steam cook for a minute or so. Injera are only cooked on one side.
6. Remove with a spatula and serve hot or place on a clean tea towel to serve later.

Top Tips:

- For a lighter injera, add 1tsp of baking powder to the mixture just before cooking.
- A percentage of gluten free, self-raising flour can be added to the batter on day 2 in place of teff, which is a very costly grain.
- As it is gluten free, the batter works very differently to a pancake type batter. It can be tricky to spread it out to the size of your pan. Start by making smaller injera the size of a side plate and gradually increase the size as your confidence grows.

MESIR WAT

Wat is one of the most popular Ethiopian dishes. It is a simple stew of onions and Berber spice, an all-purpose spice blend popular in East and North Africa. Wat is served as a sauce or enriched with protein foods like boiled eggs, chicken, beans or lentils. Serves 4

3 large onions, minced
2 cloves garlic, minced
1 tbsp grated ginger
2 tablespoons oil or clarified butter
2 tablespoons readymade Berber spice powder
200g yellow split peas, puy or green lentils
salt and pepper

1. Place the onions in a food processor with a little salt and puree.
2. Wash the lentils and cook in plenty of water until they start to soften. Drain most of cooking liquid off, but keep back a cup or two for the sauce.
3. Heat the oil in a large, heavy-bottomed saucepan over medium heat. Add the onion puree, lower the heat and sauté long and slow, stirring often, until the onion puree is dark and sticky, but not burnt! If needed, add a little water to help the onions to cook down.
4. Make a well in the centre of the onions, add a little more oil and the ginger, garlic and Berber spice mix. Cook this for a few minutes until the garlic has some colour and the spice has infused with the oil and onions. Mix in the lentils and a cup of the cooking liquid and cook for a further 30 minutes, season to taste and serve.

BERBER SPICE

An all-purpose spice mix found in North and East African cooking. Keep in an air tight container.

2 teaspoons coriander seeds
1 teaspoon cumin seeds
1 teaspoon black peppercorns
2 whole allspice berries
4 cloves
5 dried red chilies, seeded, broken into small pieces
4 green cardamom pods

3 tablespoons sweet paprika
2 teaspoons salt
1 teaspoon powdered ginger
1 teaspoon powdered fenugreek
½ teaspoon powdered cinnamon

1. Start by gently dry roasting the first 7 ingredients until they start to release their aroma
2. Allow these to cool fully before grinding to a fine powder and mixing with the salt and powdered spices
3. Store in an airtight container

JI AKPURAKPU

Yams are a tuber indigenous to Africa. They are full of carbohydrates and potassium. While not the most nutritious staple carb on the block, yams are drought hardy and store very well. Fried yam balls are found in various West African countries but this recipe hails from Nigeria and is delicious served with a spicy peanut sauce. Makes about 20 balls

1kg white yam, peeled and cubed
100g butter
1 onion, minced
2 mild green chillies, chopped
Salt & pepper
2 eggs
300g breadcrumbs
3 tsp fresh or dried thyme.
Sunflower oil for frying

1. Peel and chop the yams and boil in plenty of water until just soft.
2. While they are cooking, fry the onions in some of the butter until soft and then add the chilli and cook very briefly. Mash this with the cooked yams and the remaining butter.
3. Whisk the eggs and spread the breadcrumbs and thyme out on a plate.
4. With wet hands form the yam mash into balls the size of a ping pong ball.
5. Dip these into the egg and roll in the thyme breadcrumbs. Try to do this stage first and refrigerate the balls for an hour. This helps them to hold their shape when fried.
6. Heat about 500ml of sunflower or olive oil in a deep pan to 170°C. Fry the yam balls in batches for about 3 minutes until golden brown and drain on kitchen paper. Serve hot with peanut sauce.

MAAFE

A delicious spicy peanut and pepper sauce from West Africa. Makes 500g

4 onions, peeled and finely chopped
4 sweet red peppers
200g smooth peanut butter
2 or more scotch bonnet chillies, chopped and de-seeded if you don't want it too spicy.
Sunflower or coconut oil
Salt and pepper

1. Pre-heat the oven to 200c and halve and de-seed the peppers. Roast these for 25 minutes until soft and charring a little. Allow them to cool and then fine chop or blitz to a paste.
2. Peel and chop and fry the onions in 2 tbsp. of oil until soft, but not brown. Add the fresh chilli and cook for a moment. Then add the peanut butter, 250ml of water and pepper paste, mix well and cook gently for 5 more minutes. Add salt and pepper to taste.

TIRMIS BA TAHINI

Lupin beans are considered to be native to Italy, and their cultivation spread over the Mediterranean region several thousand years ago. In fact, lupin beans were found in the tomb of Amenemhat, the Egyptian pharaoh, who lived in the 22nd century BC. Lupin beans are one of the richest plant based sources of protein at over 35%. They are however a labour of love to prepare from dried beans as they are very high in alkaloids and as such require 3 or more days soaking with regular water changes and at least 2 hours cooking time to render them eatable. Luckily, you can buy them pre-cooked. In Egypt they are known as Tirmis and eaten as a dried and salted snack or made into a simple stew served lukewarm with chopped salad, tahini dressing and bread.

Serves 4

350g pre-cooked lupin beans, washed

4 tbsp olive oil

4 cloves of garlic, chopped

2 tbsp tomato puree

1 tsp ground cumin

Salt and pepper

200ml tahini (sesame paste)

Juice of 2 lemons

200ml water

1 clove garlic, mashed

salt

2 tomatoes

1 green pepper

1 small cucumber

1 red onion

A small bunch of parsley

Juice of one lemon

1 long red chilli, finely sliced

1. Heat the oil in a large pan and gently fry the garlic until it just starts to colour and then add the cumin. Cook this briefly then add the lupin beans.
2. Add 500ml of water or vegetable stock, the tomato puree and cook the beans for 10 minutes. Using a potato masher, crush some of the beans to thicken up the dish. Cook for a few minutes more and season to taste. Put aside to cool slightly.
3. For the tahini dressing, mix the tahini paste with the crushed garlic and lemon juice. It will emulsify and go thick and lumpy. Add water, a little at a time and keep stirring until the dressing is smooth and pourable. Season to taste.
4. Prepare the chopped salad – deseed and peel the cucumber, fine dice this and the other ingredients. Finely chop the parsley and dress with lemon juice.
5. To serve, place a generous spoon of the beans into a bowl.. Pour over a couple of table spoons each of tahini and salad. Scatter over a few slices of chilli and serve.

SHAMSI BREAD

Considered by many to be one of the oldest recorded leavened wheat bread, Shamsi or “sun” bread hails from upper Egypt and 4000 year old remains of the bread have been excavated from tombs in Giza. People still bake Shamsi bread today. It is naturally leavened using a sourdough yeast culture and relies on a regular baking practice where some of today’s dough is kept back to make tomorrow’s bread. It has a very unique shape defined by the triple crescent motif slashed round the edges of the bread before baking. The loaves are made from sieved flour and then heavily coated in the separated bran. Unusually, they are allowed to prove up uncovered so that they actually crust over in the sun before being baked. This makes for a delectably crispy crust. This will make 2 large loaves

For the starter

5g quick yeast or 50g active sourdough starter
200g whole wheat flour
125ml warm water

Mix the above ingredients together, cover and allow to ferment for up to 12 hours.

For the dough

500g whole wheat flour, sieved and the bran retained
300g strong white flour
500g warm water
12g salt

1. Mix the starter dough with the flours, salt and water and knead until smooth and glutenous. Place this in a large oiled bowl and allow to ferment in a warm place for 4 hours. If using sourdough starter, the times will be dependent on how active and lively your sourdough starter is and the temperature of your kitchen. The warmer the environment, the quicker the fermentation. Knock back the fermented dough and divide into two pieces.
2. Form these into round shapes - with each piece, place the tidier side down on your surface. Gather 6 or 8 ears of dough and fold them into the centre, you are aiming for a tight bun of dough. Turn this over so the gathered side is underneath and with your hands upright, outside down, gently start to turn the dough while stretching a little dough down and tucking under the mass with the edges of your hands. This works best with no flour on the surface as the slight tackiness helps to tighten up the underside. If your dough is not very sticky, brush the dough with water and cover liberally in the retained bran.
3. Place the loaves onto a baking sheet and allow to prove for an hour if yeasted and up to 3 hours if sourdough. Preheat the oven to 250°C or as hot as your oven will go. Just before you lace the trays in the oven slash 3 semicircles lightly into the loaf at equal points around the circumference. The curve of the semi-circle should be on the inside.
4. Place into the pre-heated oven and bake for 10 minutes at the hot setting, then reduce the heat and bake for a further 25 minutes. Cool before serving