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LUPINS: Legume based alternatives for everyday products

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(Freepik, 2018)

Introduction

The purpose of this activity was to provide our TRUE partner, *Heredade do Freixo do Meio*, with some ideas of food recipes that include lupin beans (*L. albus*) for their surplus production of 2020's harvest.

From May to June 2020, experiments took place in order to develop some “easy to replicate” recipes, employing basic kitchen supplies and equipment.

Nine recipes including savoury and sweet products were developed and a simple recipe book was assembled in order to be sent to our partners.

- Recipe 1 - Lupin - chocolate spread

Portion size: three servings (80 g)

Ingredients

- 250g of cooked lupins
- 7.5 g of unsweetened cocoa powder
- 10 mL of coconut oil
- 67.5 mL of tap water
- 1.25 mL stevia drops

Procedure

1. Dehull lupin beans and rinse thoroughly with fresh water
2. Soak beans in fresh water for at least 12 hours in order to remove the salty taste.
3. Place all of the ingredients in a food processor and blend until a paste forms (keep blending or not, depending on your desired consistency).



- Recipe 2 - Flavoured lupins

Portion size: Six servings (50 g)

Ingredients

- 100 g of coked lupins
- 150 mL of their brine water
- 3 g (1 clove) of fresh garlic (for each mixture)
- 2.5 g of herbes de provence
- 1.5 g of piri piri dry flakes
- 5 g of fresh bell pepper in small pieces



Procedure

For this experiment, 3 different flavours were developed: Piri-piri and garlic, Herbes de provence and Garlic and bell pepper.

1. For the first sample place the lupins, brine, clove of garlic in small pieces and the flakes in a clean hermetic container. Mix well and let marinate for 24 hours.
*Remove the garlic after this time to avoid an overpowered taste.
2. Mix lupins, brine and dried herbes de provence in a clean hermetic container for sample two. *This mix marinated ideally for 96 hours.
3. Lastly, sample three was made with lupins, brine, another clove of garlic in pieces and slices of bell pepper in a clean hermetic container. Mix and marinate for 24 hours. *Remove the garlic and bell pepper after this time to avoid an overpowered taste.

- Recipe 3 - Lupi-nacho

Portion size: One serving (100 g)

Ingredients

- 2 medium eggs
- 30 g of dehulled lupin flour
- 150 mL coconut milk
- 6 g of xanthan gum
- pinch of salt
- frying oil



Procedure

1. In a container, whisk eggs to then add the flour, xanthan gum and salt. Continue whisking until smooth.
2. Add the coconut milk and whisk again, ensuring that there are no lumps.
3. Let the batter rest for 5 minutes, in the meantime, place a small quantity of frying oil in a non-stick pan heat and heat it up.
4. Pour the batter in the centre of the pan and extend it until it forms a thin tortilla. Cook all the batter as such, flipping both sides until golden.
5. Once all the tortillas have cooked, prepare a non-stick pan with enough frying oil at high heat and fry the tortillas until they become crunchy (or place tortillas in the air-fryer/deep fryer).

- Recipe 4 - Lupin and pear cookies

Portion size: Five servings (4 cookies)

Ingredients

- 250g of cooked lupins
- 50 g honey
- 2 medium pears
- 30 g peanut butter
- 130 g oat flour
- 1g of pumpkin spice mix



Procedure

1. Dehull lupin beans and rinse thoroughly. Soak beans in fresh water for at least 12 hours in order to remove the salt.
2. Place lupins in the blender along with the pears cut in pieces and without seeds, blend in low speed for around 1 minute.
3. Add the remaining ingredients in the blender, with the exception of the flour and blend until it becomes a smooth paste. Transfer the mixture into a mixing bowl.
4. Gradually, add flour until the point where the dough is not sticky anymore.
5. Grease two cookie sheets with coconut oil and place a spoonful of the batter making a circular shape with the help of your fingers.
6. Add any toppings of choice (chocolate chips, caramel bits, etc.).
7. Bake cookies for 25 minutes at 180°C

- Recipe 5 - Roasted lupins

Portion size: Three servings (80 g)

Ingredients

- 250 g of cooked lupins
- 15 mL extra virgin olive oil
- 1 g smoked paprika
- 1 g garlic powder
- 0.5 g cumin
- 0.5 g black pepper

Procedure

1. Rinse lupins thoroughly under fresh water and then dry them with a clean cloth or paper towel.
2. Place lupins in a glassware container and add all the spices with the oil, use a spoon to coat evenly.
3. Bake at 180°C for 40 minutes, stir the beans halfway though and place back in the oven until the time is completed.



- Recipe 6 - Breaded pork loin with lupin flour

Portion size: Three servings (75 g)

Ingredients

- 45 g of dehulled lupin flour
- 1 g of herbes de Provence
- 15 g grated parmesan
- Salt and pepper to taste
- 3 slices of pork steaks
- 1 medium egg beaten
- Vegetal oil for frying



Procedure

1. Place the flour, herbes de Provence, parmesan, salt and pepper in a mixing bowl and combine with a fork.
2. Pass the steaks on top of the beaten egg to then coat with the dry mix. Pat the steak until it is completely covered.
3. Cook the steak in a non-stick pan with frying oil. Cook for about 8 minutes, flipping from one side to the other.

*For a special crunch, add some pulverised lupins from the previous recipe into the flour mix before coating the steaks.

- Recipe 7 - Energy balls

Portion size: Six servings (3 balls)

Ingredients

- 60 g rolled oats
- 30 g dehulled lupin flour
- 55 g dark chocolate chips
- 75 g ground flaxseeds
- 180 g peanut butter
- 50 g honey

Procedure

1. Place all the ingredients in mixing bowl and mix with a silicone spatula until they are well combined.
2. Place the mixture in the fridge for at least two hours.
3. Proceed to create small balls with your hands and store them back in the fridge.



- Recipe 8 - Legume and zucchini patties

Portion size: Three servings (80 g)

Ingredients

- 125g cooked lupins
- 75g sliced zucchini
- 45g grounded flaxseeds
- 22g nutritional yeast
- 3g of fresh parsley
- 1g of dry thyme
- Turmeric and paprika to taste



Procedure

1. Dehull lupins and rinse. Soak them in fresh water for at least 12 hours in order to remove the saltiness.
2. Place the beans, zucchini, parsley and thyme in the food processor and blend until everything is combined.
3. Add the ground flaxseeds, nutritional yeast and spices to then do short pulses on the food processor until a dough begins to form.
4. Remove the mixture from the processor and shape into patties, placing them in a cookie tray with vegetal paper.
5. Brush olive oil on top of the patties and bake them for 18 minutes at 180°C. Flip the patties, brush the other side and bake for another 18 minutes until they are done.

- Recipe 9 - Cheese and lupin pizza dough

Portion size: One serving (120 g)

Ingredients

- 60g dehulled lupin flour
- 150g shredded mozzarella
- 1 small egg
- 1g salt



Procedure

1. Pre-heat oven to 180°C in static mode.
2. Beat the egg with the salt using a fork and set aside.
3. Place the mozzarella in a mixing bowl and bring into the microwave to heat until it's completely melted (approx. 2 minutes on full power).
4. Stir the cheese with a fork to cool it down a little and then add the beaten egg and stir vigorously.
5. Incorporate the lupin flour and mix well using your hands and extending the cheese to combine all the ingredients.
6. Place the dough over a sheet of vegetal paper and begin to flatten it using the palm of your hand and fingertips in order to create a circle.
7. Make some holes in the surface of the dough with a fork and bake it for 15-17 minutes or until golden brown.
8. Remove the base from the oven and let it cool before adding the toppings of choice.

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References

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