



XV INTERNATIONAL LUPIN
CONFERENCE 2019

**THE USE OF WHITE LUPINES
AND OTHERS SEEDS AS
MEDICINAL SUPPLEMENTS AT
BREAKFAST TIME**

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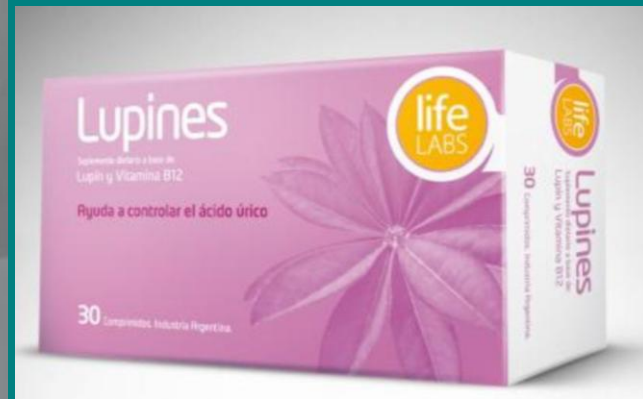


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Medicinal herbs are widely used both for culinary and therapeutic purposes from ancient times and they are part of the traditional medicine. The benefits of medicinal plants and seeds in illness treatment or as illness prevention are becoming more widely used in Argentina as a regular health care practice. In the last two decades commercial seeds and seeds medicinal products are consumed daily without prescription.

USES OF WHITE LUPINS IN ARGENTINA

Bitter white lupines (*Lupinus albus*) and tablets obtained from pure extracts of grains by laboratory "Natufarma" (Lupines with vitamin E), and by "Life lab" (Lupines & Vitamin B12) are sold in herbal and dietary shops and pharmacies as dietary complement and medicine to reduce blood contents of uric acid and cholesterol and to control gout and rheumatism.

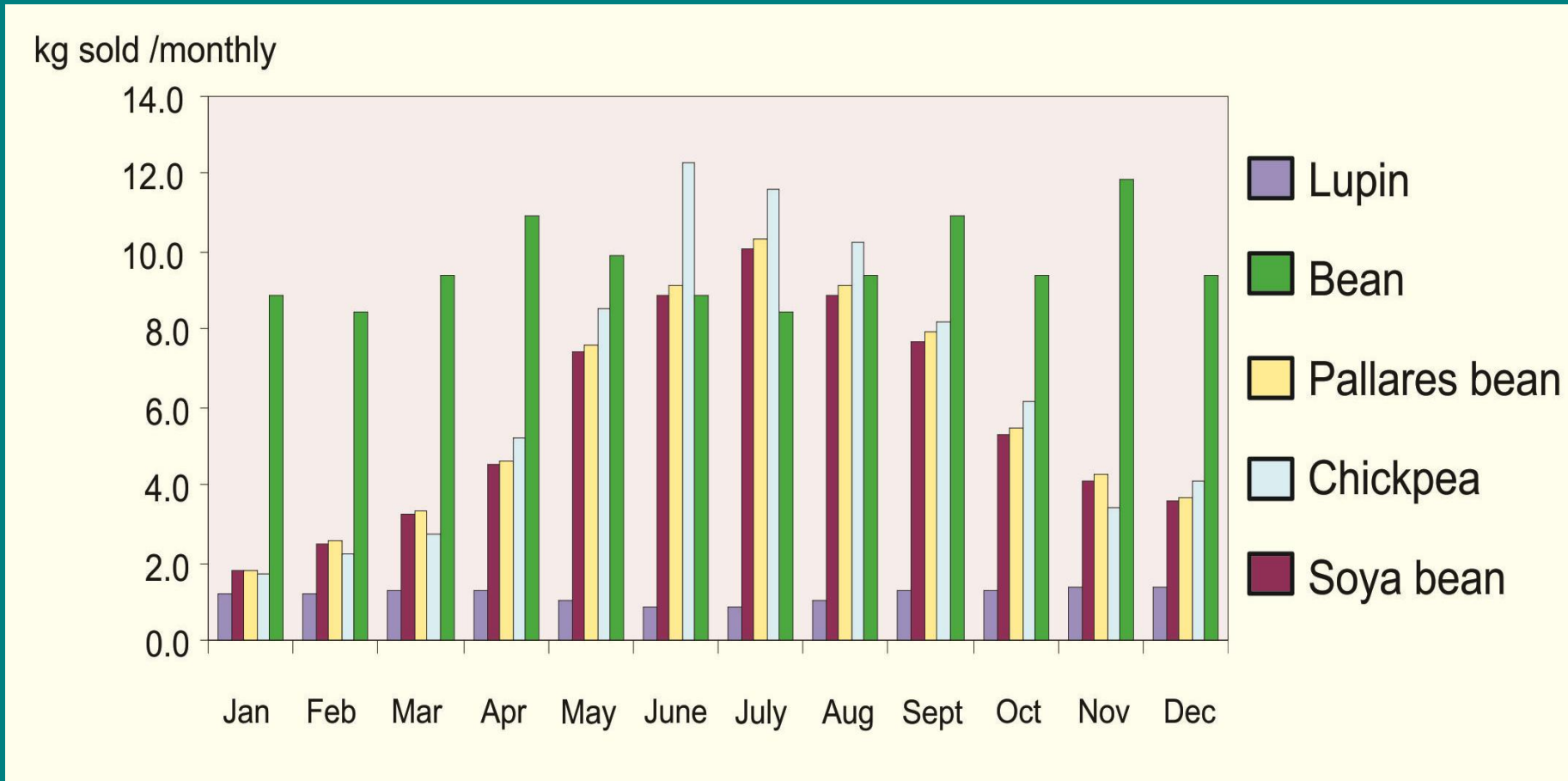


WHITE LUPINS versus PULSES IN ARGENTINA

Bitter white lupin seeds are commonly commercialize as pickles in salty water and consume as appetizers usually with cheeses, olives and sauces. In contrast, pulse such as beans and chickpeas are regularly used in cooking meals and traditional dishes.



MEAN VOLUMEN OF WHITE LUPINES AND PULSES SOLD IN THE RETAIL MARKET IN CÓRDOBA ARGENTINA



There is a big difference in the volume of pulses and lupines sold in retail market in Córdoba

BACKGROUND OF THE STUDY

Given the notorious increase in the consumption of grain in past decades in Argentina, such as chia, sesame, poppy, amaranth and millet, it was done a study to evaluate the impact of the use of these species and white lupines in the daily intake as breakfast meal in a group of people who consume foods that contribute to health care.

DEFINING THE TERM MEDICINAL BREAKFAST

The uses of seeds as medicinal supplement meals at breakfast time, was defined as “medicinal breakfast” which mean: seeds as meal taking at breakfast time with the aim of get good nutritional benefits, medicinal treatment to cure or prevent diseases, as well as, enhance health and beauty.



DEFINING INGREDIENTS FOR MEDICINAL BREAKFAST

For this research all plant ingredients used as part of the medicinal breakfast are denominated with the generic name of “seeds” (*sensus lato*) in concordance with names used in the food shops, although many ingredients are complexes seed dispersal organs.

MATERIAL & METHODS

A transversal survey to collect information with a standardized procedure with predetermined answers, was submitted for 30 days to the customers of mayor health or dietary food stores as the ones in the pictures.



CITIES WHERE WAS CONDUCTED THE SURVEY

- **CÓRDOBA CITY**
population 1,560,900
(10 shops)
- **ALTA GRACIA CITY**
population 53,500 (two shops)
- **BUENOS AIRES CITY**
population 12,801,364
(25 shops)



SURVEY STRUCTURE

Two different questioner forms were provided. One was to know and register the use of lupines seeds and lupines tablets, the other was to know and register de use and the list the seeds or seeds products used with medicinal purpose as breakfast meal. Gender question was optional and the age was registered, using a scale of ages that began with less than 20 years and ended with more than 80.

The information was recorded and processed following the Code of “Ethics of the International Society of Ethnobiology”

SURVEY QUESTIONERE FORMS

CONSULTA SOBRE USOS DE POROTOS Y PASTILLAS DE LUPINES Ó LUPINOS

PROYECTO "DESAYUNOS MEDICINALES"

Barrio del negocio: _____

Domicilio y nombre negocio (opcional): _____

A las personas que usan porotos o pastillas elaboradas con lupines se le solicita que por favor respondan a las preguntas de esta consulta para poder llevar a cabo un proyecto de investigación sobre los usos de estos productos. Por cualquier consulta sobre el tema por favor comunicarse con la Dra. Ana M. Planchuelo, Facultad de Ciencias Agropecuarias, Universidad Nacional de Córdoba, Correo electrónico: aplanch@gmail.com. La información se procesará según el *Código de Ética de la Sociedad Internacional de Etnobiología*.

MUCHAS GRACIAS POR SU COLABORACIÓN

Marque con una X o indique lo que corresponde:

¿Toma porotos de lupines? ¿Toma pastillas? ¿Toma porotos y/o pastillas?

¿Qué porotos le parece más efectivos? Dulces Amargos Es lo mismo

¿Para qué tomalupines?:

Bajar colesterol Bajar ácido úrico Las dos cosas Otro, ¿cuál?

¿Toma la misma cantidad todos los días?: 1xdía 2xdía 3xdía Otra, ¿cuántas?

¿Varía la cantidad por días de la semana?: 1,2,3 y repite 1,2,3,4,5 y repite

otra forma, indique:

Rango edad años:- 20 21-30 31-40 41-50 51-60 61-70 71-80 + 80

Se hace análisis de control: 1 ó mas al año cada 2 años +2 años nunca

CONSULTA SOBRE USO DE SEMILLAS COMO COMPLEMENTO DIETARIO DURANTE EL DESAYUNO.

PROYECTO "DESAYUNOS MEDICINALES"

Barrio del negocio: _____

Domicilio y nombre negocio (opcional): _____

A las personas que usan semillas como complementos dietéticos durante el desayuno, se le solicita que por favor respondan a las preguntas de esta consulta para poder llevar a cabo un proyecto de investigación sobre los usos de estos alimentos. Por cualquier consulta sobre el tema por favor comunicarse con la Dra. Ana M. Planchuelo, Facultad de Ciencias Agropecuarias, Universidad Nacional de Córdoba, Correo electrónico: aplanch@gmail.com. La información se procesará según el *Código de Ética de la Sociedad Internacional de Etnobiología*.

MUCHAS GRACIAS POR SU COLABORACIÓN

Marque con una X o indique lo que corresponde:

¿Toma semillas como complemento dietético durante el desayuno? Si No

Marque con una X las semillas que usa o indique en la zona de cuáles utiliza

Almendras Amapola Amaranto Avena arrollada Chía Germen de trigo

Girasol Lino Mijo Sésamo Otras semillas

¿Cómo incorpora las semillas en su desayuno? Marque con una cruz o indique otra:

Solas secas Remojadas en agua En panes En galletas Con yogur En licuados

Otra forma

¿Cuál es el motivo de la ingesta de las semillas? Marque con una X o aclare en otras:

Estar saludable Adelgazar Bajar colesterol Bajar ácido úrico

Fortalecer los huesos Mejorar la memoria Estar más activa

Otra forma

Rango edad años:

- 20 21-30 31-40 41-50 51-60 61-70 71-80 + 80

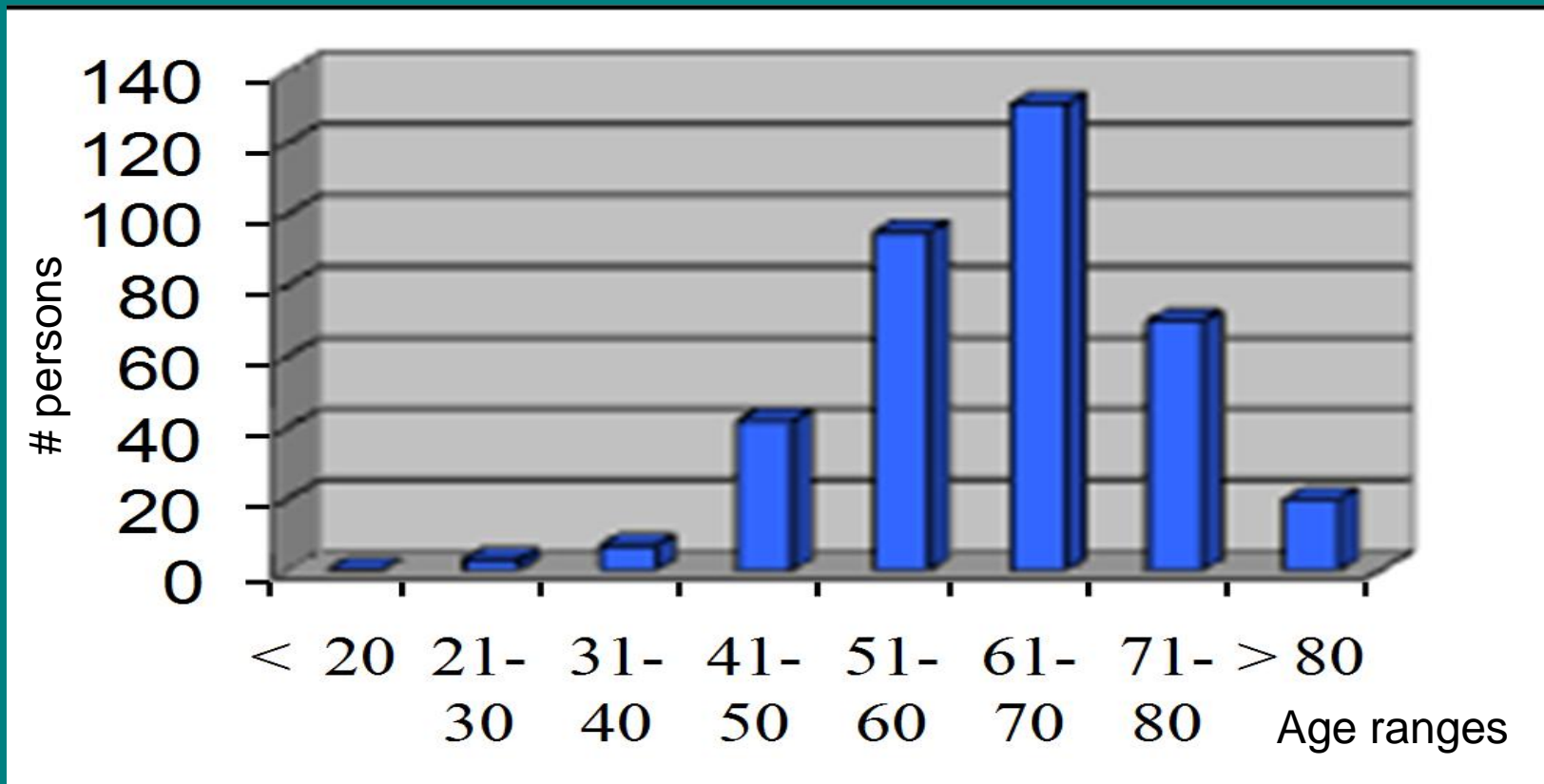
Se hace análisis de control: 1 ó mas al año cada 2 años +2 años nunca

RESULTS OF LUPINES SURVEY

The majority of respondents that use lupines seeds or tablets are men between ages 50 to 80 years old. Consumers and dietary business owners, considered that the medicinal lupines are the bitter ones; however, they do not know that contain alkaloids which in large amount are toxic. Most of the participants declared having blood tests that demonstrate the efficacy of oral intake of white bitter lupines and/or tablets of lupines, to reduce uric acid and cholesterol and rheumatism symptoms.

AGE OF LUPINE CONSUMERS

The total number of positive answer for the lupines survey reach 368 people, which were distributed as follows: Buenos Aires 272, Córdoba 83 and Alta Gracia 13. The figure shows the distribution of people by ranges of ages



PEOPLE USING LUPINE SEEDS AND LUPINE TABLETS AND THE PURPOSE OF THEIR USES

	Bs As N=272	Cba N=83	AG N=13	Total
Uric acid	189	68	10	267
Cholesterol	20	2	1	23
Both UA & Ch	63	13	2	78
Lupin bean	170	58	9	237
Lupin pills	34	16	4	54
Both beans & pills	68	9	-	77

RESULTS OF SEEDS SURVEY

The majority of respondents eating seeds other than lupines in breakfast meal are women, ages 25 and older. Depending on the type of seeds, they are consumed as whole or crushed seed, alone or mixed with yogurt, smoothies, fruit juices, on toast smeared with cream cheese or incorporated into cookies or breads.

MAIN SPECIES USED IN MEDICINAL BREAKFAST

Almond (*Prunus dulcis* (Mill.) D.A.Webb)

Amaranth (*Amaranthus caudatus* L.)

Chia (*Salvia hispanica* L.)

Flax or linseed (*Linum usitatissimum* L.)

Lupines (*Lupinus albus* L.)

Millet (*Panicum miliaceum* L.)

Oat flakes (*Avena sativa* L.)

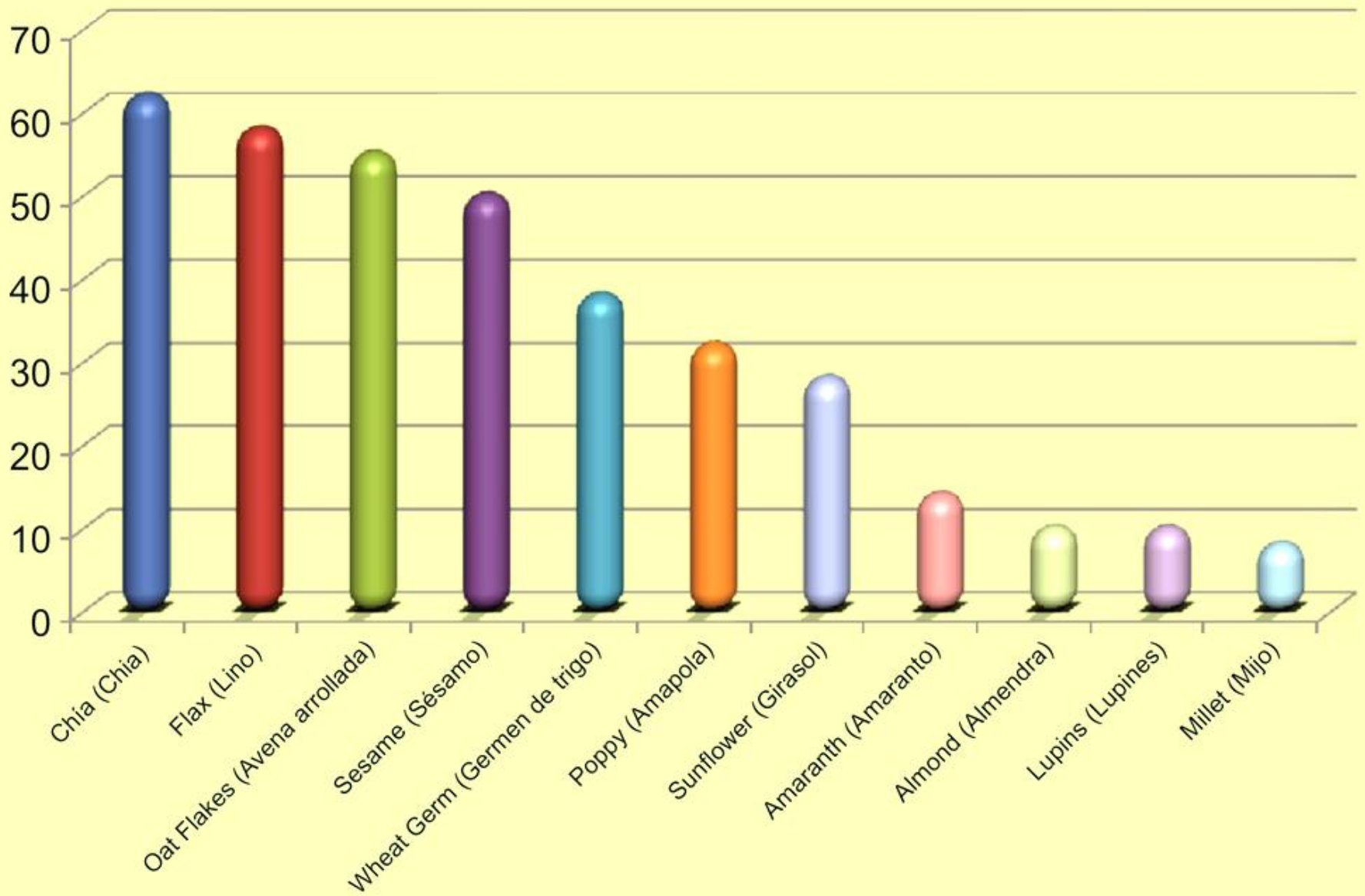
Poppy (*Papaver somniferum* L.)

Sesame (*Sesamum indicum* L.)

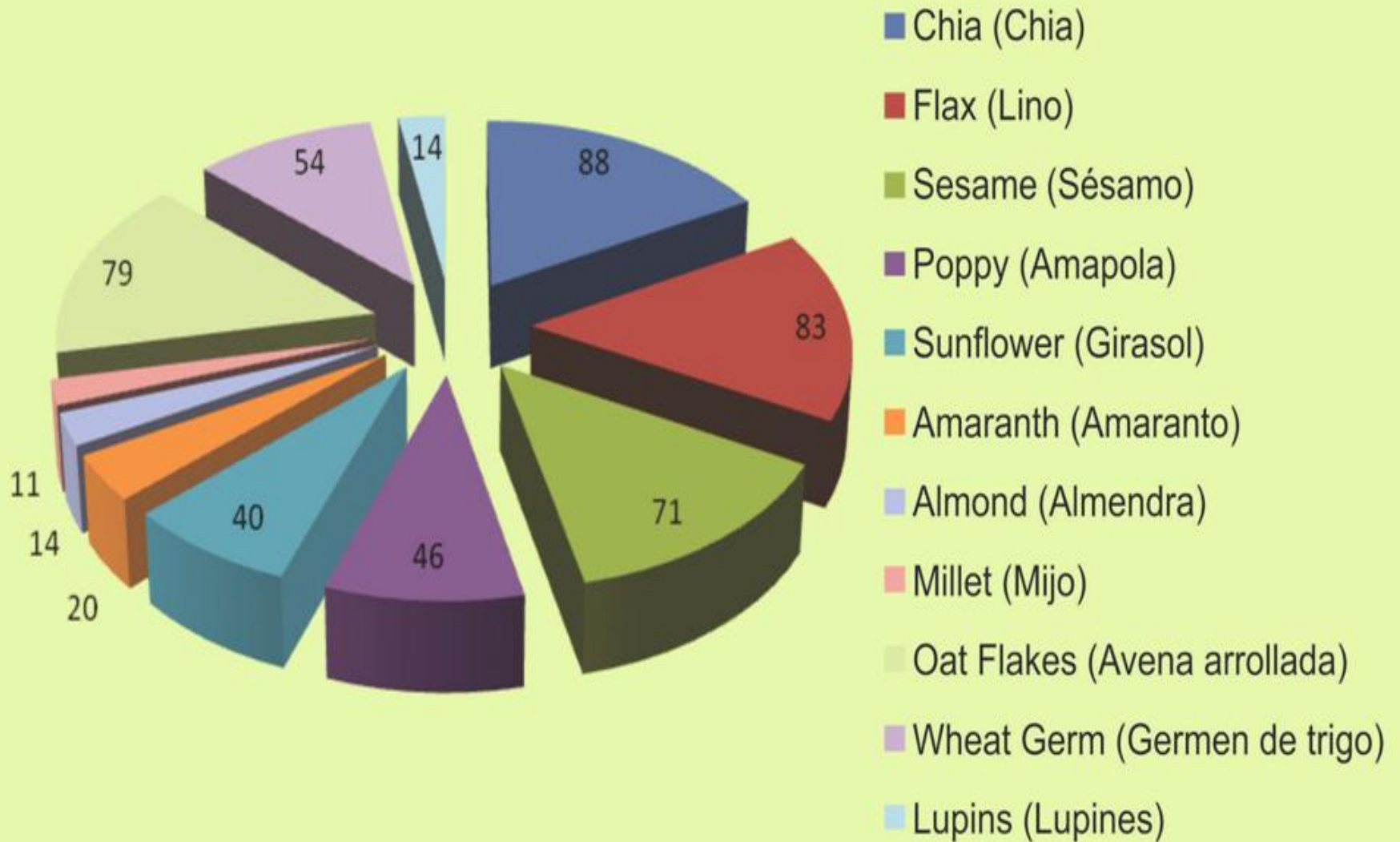
Sunflower (*Helianthus annuus* L.)

Wheat germ (*Triticum* sp.)

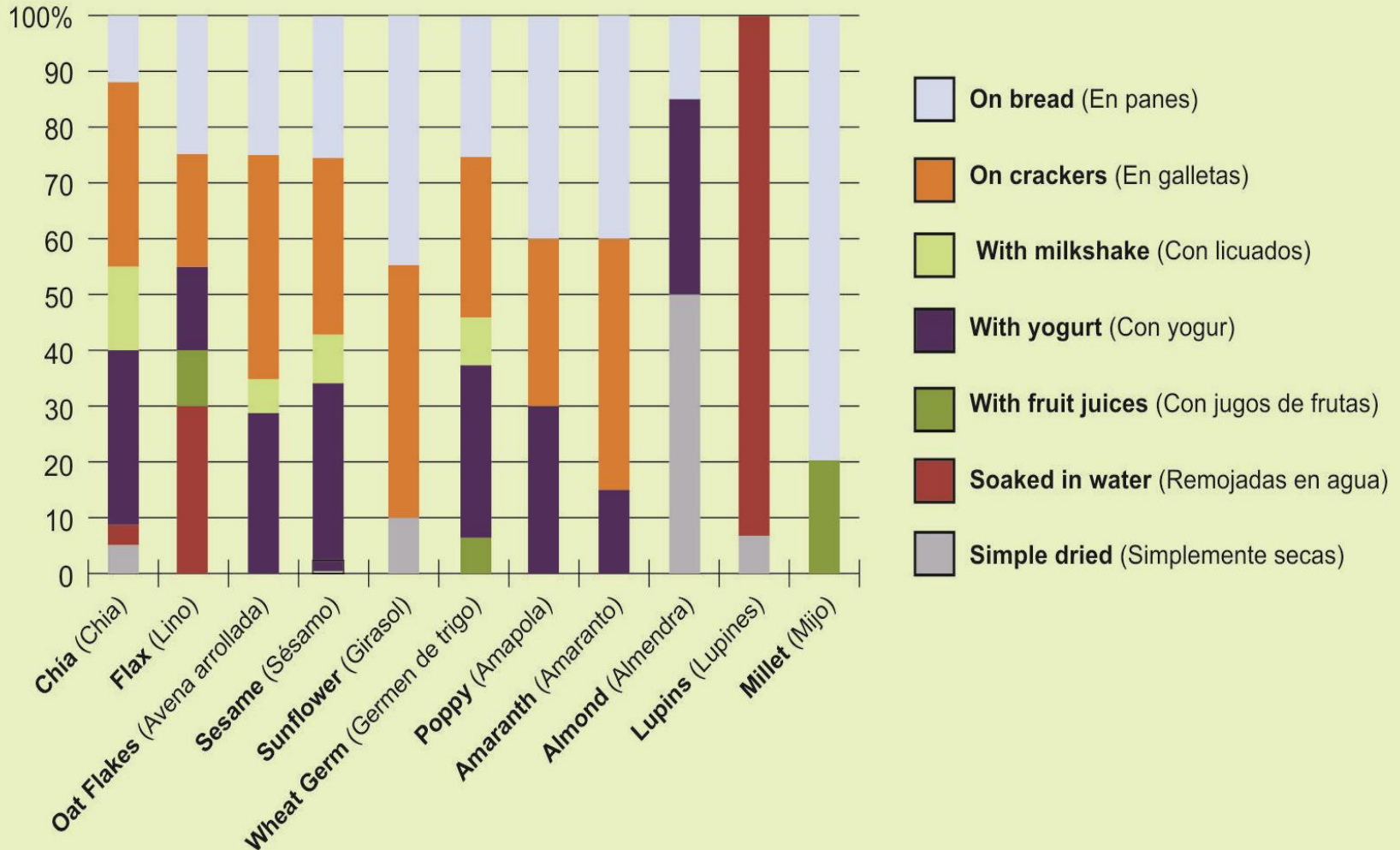
Consumption of seeds by respondents



Percentage of seeds consumption by respondents



RELATION BETWEEN WAY OF INGESTION OF SEEDS



CONCLUSION

The results confirmed the use of soaked seeds of white bitter lupines (*Lupinus albus* L.) in order to lower the levels of uric acid and cholesterol. This research reveals that people consider that ingesting seeds in the morning is a healthy habit for preventing illness, which are giving credit to the denomination of medicinal breakfast.



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THANK YOU

The contribution of the people and the personal of the shops that participate in the survey, as well as, the institutions that provided financial support for the research are greatly appreciated

