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Cumin in Syria, Production & Trade

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1. Introduction

This paper intends to provide with a brief picture of the state of the cumin product and market in Syria. It introduces the crop in terms of uses, production, marketing, trade and current policies. Available data show that Syria has a good potential for producing and exporting cumin as a cash crop that could enhance the Syrian agro food exports. Syria seems also keen to improve quality and enlarge cumin cultivation to meet the foreign trade needs.

2. Plant description

Cumin is an annual herb of the family Apiaceae (Umbelliferae) and grows to about 30-50 cm tall. It has dissected leaves with white or rose-colored flowers. Its seeds come in three colors: a yellowish brown color white or black. The seeds have abundant essential oil content between 2.5 and 4.5 % essential oil on a dry weight basis. The oil is usually obtained by steam distillation.

2.1 Origin and Uses

Cumin is originally cultivated in Iran, India, and the Mediterranean region. The name cumin is said to be a distortion of the Persian city Kerman, where most of ancient Persia's cumin was produced. Cumin has been grown and used as a spice since ancient times and it is mentioned in the Sacred Bible. Also Babylonian and Assyrian doctors used cumin in their recipes to discharge gases, prevent diarrhea in children and control stomach spasms.

Cumin is used primarily in curry pastes. It is an essential ingredient in many mixed spices, chutneys, and chili and curry powders. In the Middle East, it is a familiar spice as flavor over meat and vegetables, while in Europe, cumin flavors certain Portuguese sausages, and is used to spice cheese.



2.2 Cumin as an internationally traded good

Currently the major sources of cumin are Iran, India, Syria, Pakistan, and Turkey. It is also found in Morocco, Egypt, Palestine, Iraq, Afghanistan, North America, and Chile.

Iran accounts for about 50% of total international cumin seed exchanges and it has the same growing season as in Syria. Also, India is a large producer and an earlier growing season than Syria, but 90% of national production is consumed internally.

3. Cultivation and harvesting in Syria

Cumin is a very important crop in Syria. It is considered an important source of foreign earnings. It is comprising a good part in land use in marginal dry areas, generating employment opportunities and incomes and improving the economic returns of producers.

Syrian climate offers great potentials for planting cumin which is described as drought tolerant and its cultivation requires a long, hot summer with 3-4 months with daytime temperatures around 30 °C. The plants thrive on rich, well-drained sandy loam soil. Cumin can be rainfed cultivated and grows well between 250–400 mm annual rainfalls and is relatively sustainable for dry areas as it requires little water.

Cumin is grown as a winter crop in Syria. It is usually planted in many Syrian regions during the period between mid November and mid December, but it can be extended up to mid January depending on weather conditions. The seeds are collected and threshed four to five months after planting. So, harvesting starts in the month of May along to the end of July and is conditioned by the biological maturity of the seed. As mentioned above, the harvest time of cumin in Syria usually comes later than the harvest in India which ended in May, but earlier than in Turkey which normally starts in July. Thus, the main competitor to Syrian cumin in the international market when harvested is Iran, where harvesting season starts in June and ends in August. Syria's cumin is distinctive due to its strong aromatic and special taste it gives to food dishes. It is also valued for its medical effects as well as for its flavor, which is strongly aromatic.

There is a considerable loss in the amount of cumin produced in Syria due to improper post-harvest operations particularly if harvested during day time in which seeds are dispersed and resulted in a gap between the gross production and net availability.

Cumin is usually stored in airtight containers and placed in dry, cool areas, away from the light. Its flavor and aroma can be retained for up to six months.

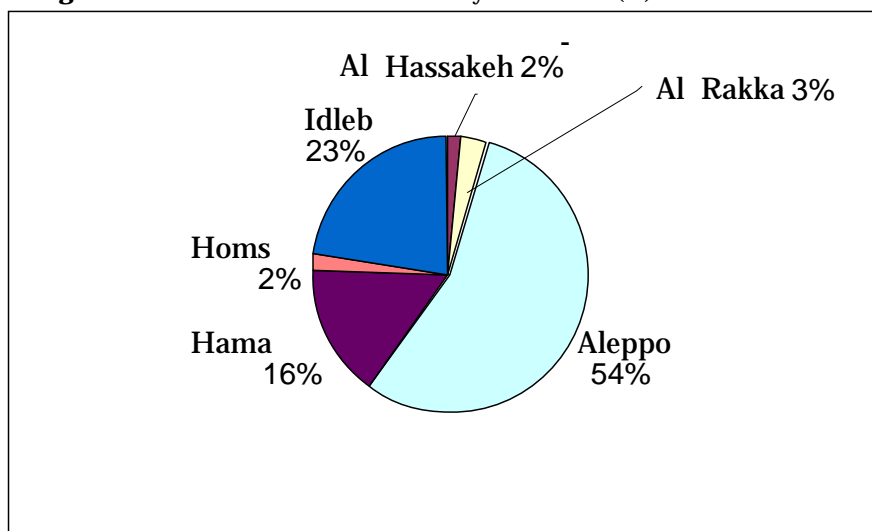
3.1. Area, production and yields

Cumin is grown in various regions in Syria, but most of the areas under cultivation concentrate in Aleppo, Idleb, Hama, Al-Rakka and Homs. Over 96 % of total production comes from those regions (figure 1).

Cumin has been grown on a considerable scale in the last few years. A quick look on the National Statistics reveals that the total acreage planted with Cumin varied between 20,829 ha in 1995 to 53,864 ha in 2004 (table 1). However, there were years witnessed remarkable increase in the planted area with a peak of 133,843 ha reached in 2002 and a decline. Thus, the total acreage planted with cumin varies in line with the fluctuations of the cumin local and international market price and other factors such as the use of the land allocated to other crops when prices got down.

Figure 1 shows the regional distribution of cumin in Syria in 2004. Aleppo dominates the cultivation land of cumin with more than half the area and Idleb came second with about quarter of total area.

Figure 1 - Cumin area distribution in Syria in 2004 (%)



Source: NAPC database

Tables **1a** and **1b** reveal the cumin areas in the Syrian regions, showing the distribution between irrigate and rainfed areas. It shows that irrigated cumin is planted in very limited areas (about 2.1%) as an average for the period 2001-2004.

Table 1 - Irrigated and rainfed cumin area 2001-2004.ha

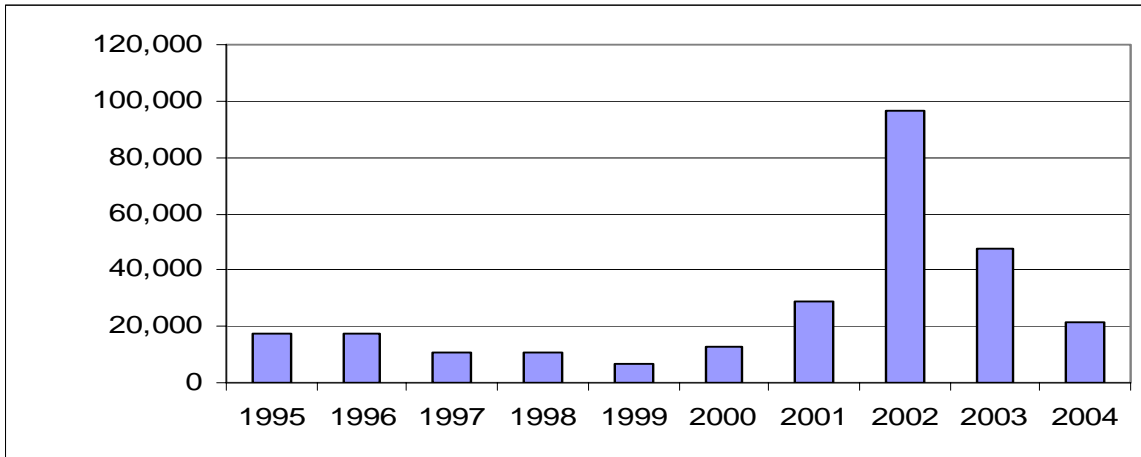
Area/ Governorates	Irrigated Area				Rainfed Area				Rainfed& Irrigated Area			
	2001	2002	2003	2004	2001	2002	2003	2004	2001	2002	2003	2004
Al-Ghab		63		2	15	112	20	33	15	175	20	35
Al-Hassakeh	6	154				22,703		861	6	22,857	0	861
Al-Rakka	35	346	10			11,821	4,191	1,737	35	12,167	4,201	1,737
Hama	751	3,147	1,357	1,285	13,341	19,998	12,890	7,376	14,092	23,145	14,247	8,661
Homs	150				10	1,593	1,000	943	160	1593	1000	943
Aleppo					14,228	51,386	37,308	30,383	14,228	51,386	37,308	30,383
Idleb					11,872	22,001	18,444	12,530	11,872	22,001	18,444	12,530
Lattakia							2,271		0	0	2,271	0
Syria	942	3,710	1,367	1,287	39,476	130,133	76,156	53,864	40,418	133,843	77,523	55,151

Source: NAPC database

Syria's annual production of cumin seed has varied between 17,096 tons in 1995 to 21,776 tons in 2004 (27.4% increase), recording unprecedented level in 2002 with 96650 tons This growth

of course reflects the increase in the cultivated area in response to perceived profitability as compared with respect to other alternatives.

Figure 2 - Development cumin production in 1995 to 2004, tons

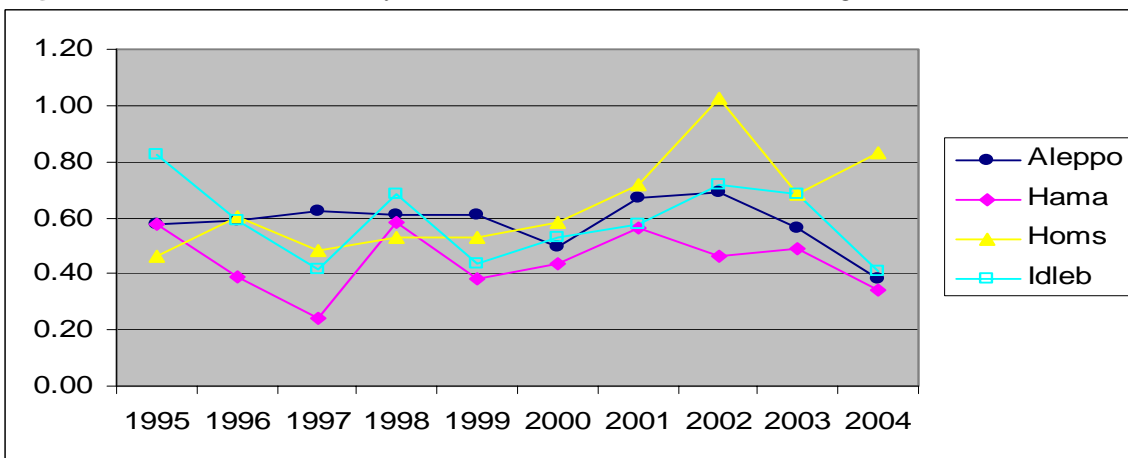


Source: NAPC database

Though there was a 238% growth in production in 2002 against 2001, in following year production has declined. In 2003, the fall in production was 50.8%, and in 2004, it was 54.2%, compared to 2003 due to local price decline when production increased. Moreover, although the cumin crop appears profitable, weather pests and diseases have also an influence on the short-term production of cumin.

In general, cumin yield variability is reportedly very high caused by rainfall variation and temperature. The average Syrian cumin seed yields vary between 0.66 and 1.2 ton/ha in irrigated lands and between 0.32 and 0.82 ton/ha in rainfed areas (figure 3 reflects this variability in yield according to seasons and regions).

Figure 3 - Evolution of cumin yields in the main Governorates during 1995-2004, ton/ha



Source: NAPC database

3.2. Consumption, market and prices

Syria's domestic consumption is hard to be estimated. However, one can say that only a small amount of the annual production is sold internally (about 14%)¹, so most of the production is exported. Exported quantities in some years surpass production quantities for the same year indicating the existence of a surplus that was stored from the previous years.

Cumin is considered a profitable cash crop compared to other cultivations in Syria. Nevertheless, the marketing organization is still traditional and consists of several intermediaries. Accordingly, cumin prices show high volatility, and usually, the farm-gate price available to the farmers is much less than retail price. Usually prices decreased when supply increased.

Cumin local prices in Syria showed significant declines from Sp 128.8 per kg in 2001 to Sp 119.3 per kg in 2002 in response to production growth in this year. Reversely, they went up from Sp 118,7 per ton in 2003 to Sp 121.5 in 2004 due to production shortage in 2004(NAPC database 2005). For this reason, farmers sometimes are obliged to store their cumin until better prices are available, signing futures contracts with retailers, or replacing cumin in the rotation with wheat or barley to reduce market risk.

3.3 Syrian Cumin Trade

As indicated in the beginning, most of the world cumin comes from India, Pakistan and from Middle East countries of Turkey, Iran and Syria. Syrian cumin is appreciated all over the world as it has a good quality. This can be suggested by the fact that, the volume of Syrian exports has doubled between 1999 and 2004 from 13,855 tons in 1999 up to 31,128 tons in 2004. Export growth picked up when rapid trade expansion was present in 2002. however, the export rate after that has turned down by 31% in 2003 and followed by another slight decline in 2004 (figure 4)

Data on the total value of crop export between 1995 and 2003 show a dramatic increase in the Share of cumin in Syrian total agricultural export value (from 1.2% to 4.4%), see Table 2. Foreign exchange earnings by Syria from the exports of cumin are estimated to be considerable reaching a record of \$ 131 million in 2002, representing such year 10.7% of the Syrian total agricultural export value.

Table 2 - Export value of Syrian cumin and total agricultural exports, 1995-2004, US\$ and %.

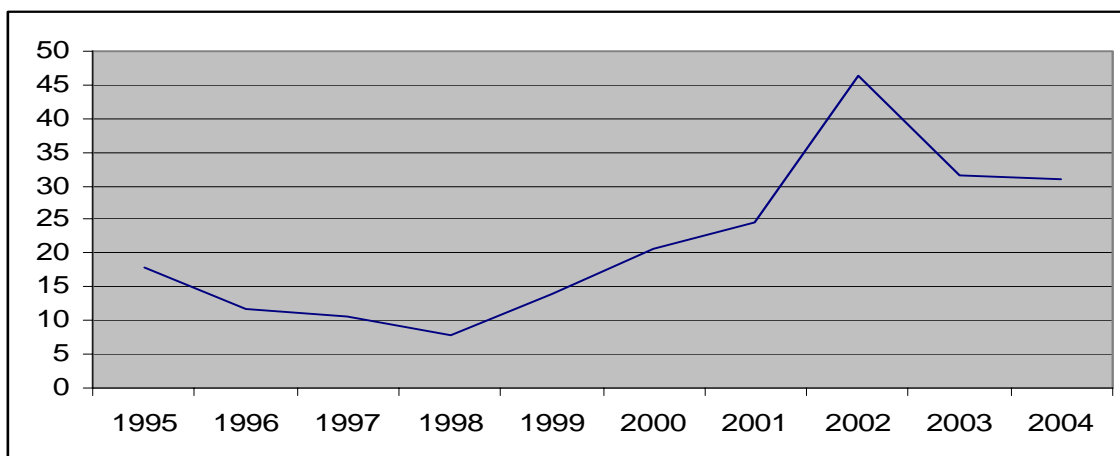
World	1998*	1999*	2000	2001	2002	2003	2004
Cumin exports (million US\$)	12	21	35	75	131	43	25
Total agricultural exports (million US\$)(939	791	783	823	1,225	970	1,127
Cumin's share in Syrian Agro exports (%)	1.3	2.7	4.5	9.1	10.7	4.4	2.2

Source: NAPC database

A 149.8% increase on average in the export volume of cumin occurred between 1995-1999 and 2000-2004. Figure 4 indicates the dynamism of Syrian cumin exports. In year 2003 we witnessed a fall in total cumin exports by 31.8% compared to 2002 and further slight decrease in 2004.

Figure 4 - Cumin export development, 1995-2004, Thousand tons.

¹ Consumption is estimated by subtracting exports from total production as an average for the period 2001-2004, since imports were very limited (only 0.2%)



Source: NABC database

The export of cumin has a considerable potential particularly to Arab countries. As shown in table 3 exports to Arab countries developed remarkably from 5,552 ton in 1995 to 14,203 ton in 2004. Saudi Arabia and United Arab Emirates are the main importers of Syrian cumin in the Arab region.

In fact, cumin is one of the most Syrian agricultural products that showed market diversity because it is exported to more than 50 countries. the largest portion of Syria's shipments was destined to United Arab Emirate, USA, Brazil and Saudi Arabia fetching the country more than SP 1390 million(US\$ 26.7 million) as an average for the period 2001-2004. Egypt was also a strong market for Syria in the early 2000. Some European countries, mainly Germany, are among leading importers of Syrian cumin seeds. Morocco's imports increased from 835 tons in 1995 to 1541 tons in 2004.

Table 3 - Development of Syrian cumin export to Arab countries (1995-2004), Tons.

Countries/ years	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
All Arab Countries	5,552	2,707	3,999	2,652	3,082	6,572	11,863	21,895	13,427	14,203
United Arab Emirates	2,104	776	100	0	6	4,090	5,697	9,379	2,345	5,971
Saudi Arabia	1,988	1,145	2,013	1,031	976	1,279	2,334	4,596	4,018	3,182
Egypt	233	173	963	585	346	99	647	2,371	3,252	1,596
Morocco	835	319	351	548	1,249	623	1,243	1,556	2,028	1,541
Jordan	1	43	143	184	116	34	98	695	262	203
Tunisia	72	0	118	7	110	99	278	309	235	243
Other countries	319	251	311	297	279	348	1,566	2,989	1,287	1,467

Source: NABC database

As for import, although Syria is not considered importer of cumin, it recorded small imports which showed an upward trend in cumin imports in the last few years in the context of Great Arab Free Trade Area. Average annual quantity of cumin imports in 2001-2004 was about 41

tons. Most of the imported product comes from Srilanka and Iraq, with a very small amount of cumin from Jordan

3.4 Policies

Policies that encourage the increase of production and productivity, export promotion as well as protecting local products by imposing high tariff on its imports are applied for cumin. In addition, the new shift in plan policies toward introducing more freedom in implementing the annual agricultural plan will encourage expanding cultivation of cumin if it proved to be better for farmers. However, major challenges for achieving this goal are inappropriate farming methods, poor distribution as well as absence of primary processing systems.

Recommendations

Indicators illustrate that, Syria has the potential to make cumin cultivation a profitable business that create income and provide foreign currency to the country, specially Syrian cumin is facing limited competitors in the international market provided that the domestic industry is able to produce quality to compete in the foreign markets. This has to do with the satisfaction of international standards and the promotion of the cumin with higher production potential and better export demand. Moreover, Syria is able to widen cumin plant due to the fact that cumin can be successfully planed in rainfed lands and it is a good tolerant to high temperature, but that need to make more efforts in looking for new markets through Syrian attachés in the embassies and exporters and in reducing costs by adopting mechanical activities.

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