



# Cannabis yield estimation

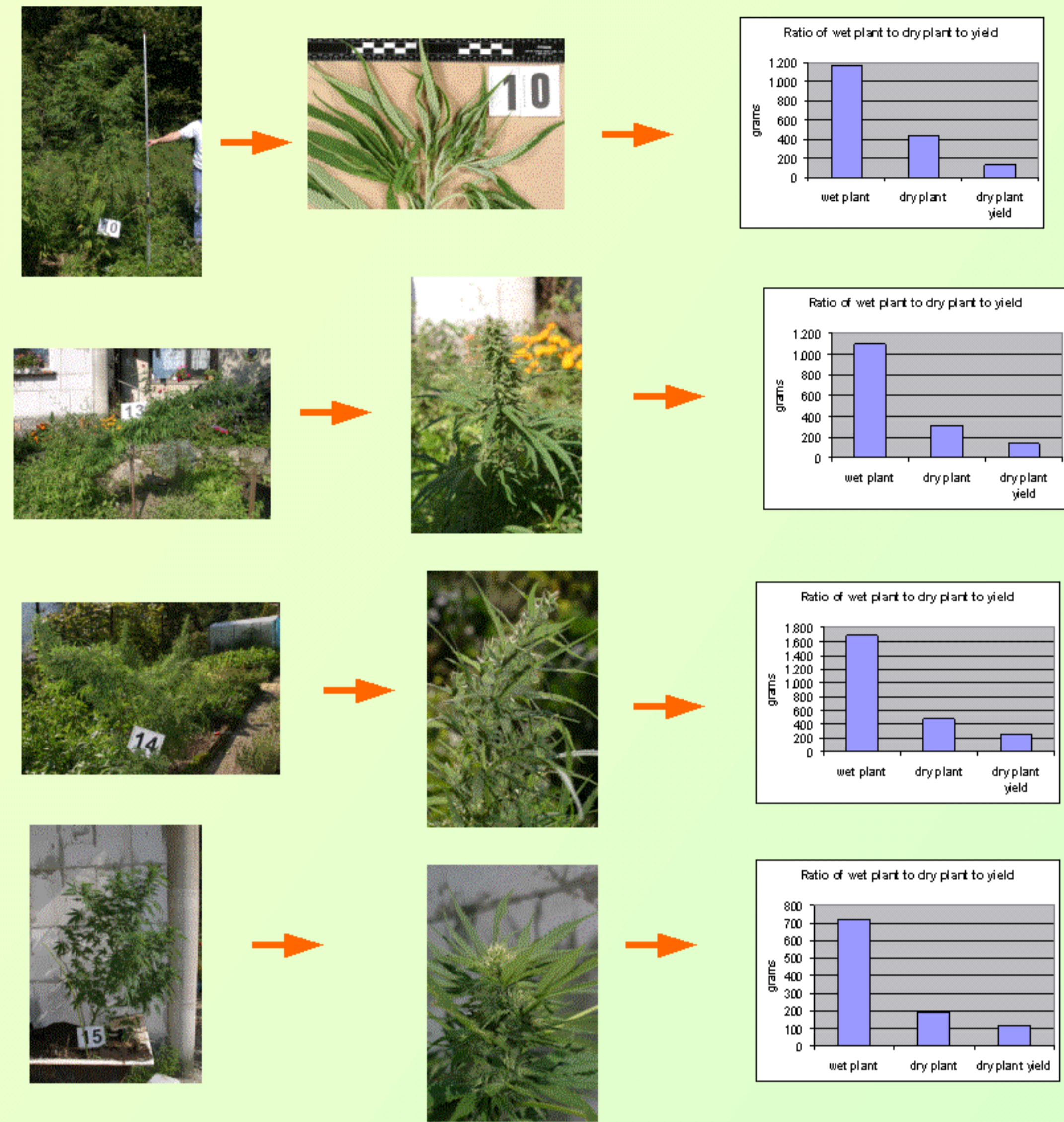
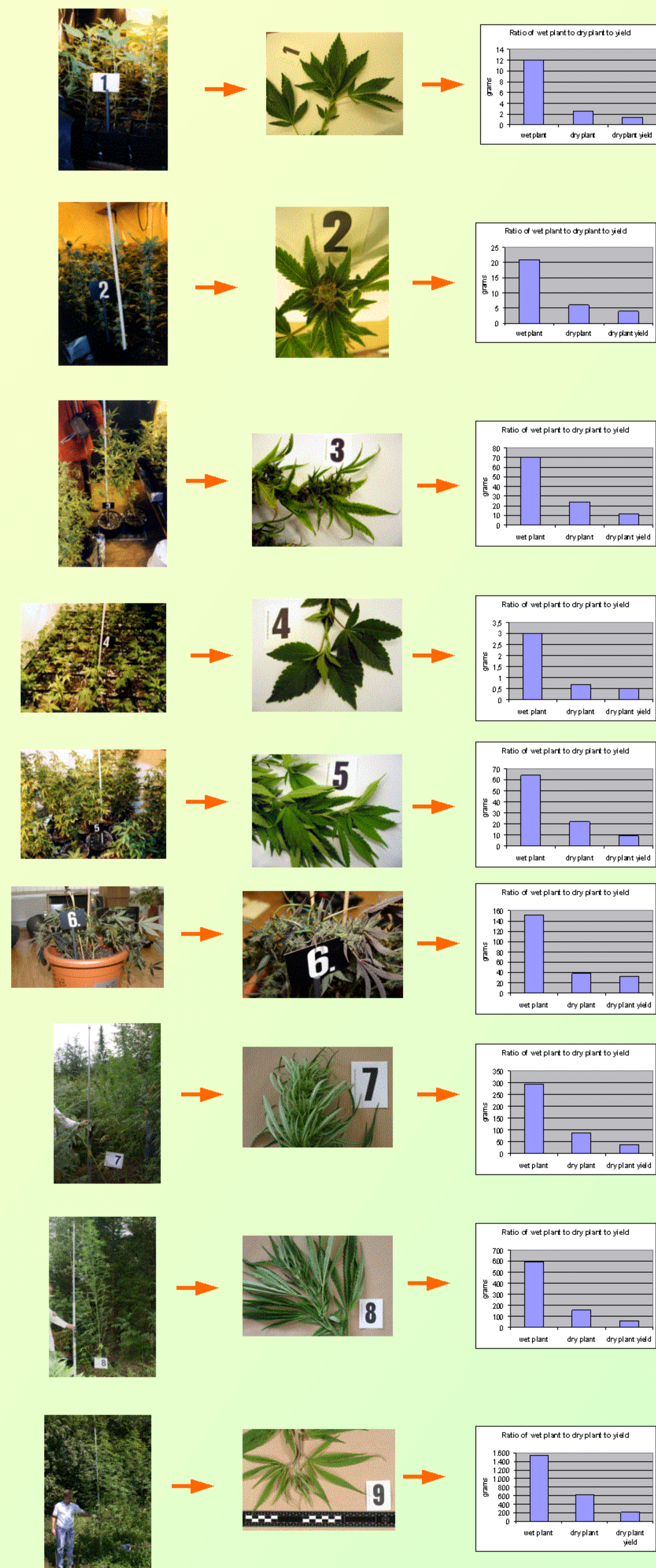
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## 1. Introduction

- For cannabis yield estimation study a survey to determine the quantity of cannabis plant material that is suitable for consumption (dried leaves and buds) and it can be obtained from the individual cannabis plants was done.
- Quantity of cannabis plant material, useful for consumption, which can be obtained from individual plants, largely depends on variety of cannabis, plant gender, degree of maturity of plants, planting density, environmental growth conditions and cultivation method.
- The study dealt with six indoor and nine outdoor grown plants. Plants with different characteristics (height, branched and level of maturity of plants) were selected. Gender and varieties of plants were not considered.
- Whole plants (without roots) were weighted immediately after cutting and air dried for about three weeks in a confined space (most of cannabis plant material, which appears on illegal market, is dried under similar conditions).
- After drying, the plants were re-weighted. The mass material, useful for consumption, acquired by the individual cannabis plants, was determined by weighting dried leaves and buds, removed from dried plants.
- Based on measured weight, the mass fraction of useful material in relation to weight of dried or fresh plants was calculated.

## 2. Results



Indoor grown plants								
plant (number)	height (cm)	width (cm)	growth stage	branched plant	wet plant (grams)	dry plant (grams)	dry plant yield (grams)	yield / wet plant (%)
4	22	15	young	poorly	3	0,7	0,5	17
1	48	24	young	poorly	12	2,5	1,4	12
5	73	30	young	medium	64	22	9	14
2	44	20	flowering	poorly	21	6	4	19
6	24	60	flowering	densely	152	38	32	21
3	102	50	flowering	densely	70	24	12	17

Outdoor grown plants								
plant (number)	height (cm)	width (cm)	growth stage	branched plant	wet plant (grams)	dry plant (grams)	dry plant yield (grams)	yield / wet plant (%)
10	270	100	young	medium	1172	443	130	11
8	300	70	young	medium	593	157	60	10
9	320	150	young	densely	1536	625	206	13
11	130	50	flowering	densely	539	143	108	20
14	140	160	flowering	densely	1688	485	256	15
15	150	100	flowering	medium	723	194	111	15
12	180	70	flowering	medium	368	112	64	17
7	220	50	flowering	medium	295	89	39	13
13	220	30	flowering	medium	1099	319	142	13

## 3. Conclusions

This obtained results, that are comparable to literature data, [1, 2, 3] have been used for the court expertises of hemp yield estimation.

Indoor grown plants					
young plant					
	height (cm)	dry plant yield (grams)	yield to wet plant ratio (%)	yield to dry plant ratio (%)	percentage of water in wet plant (%)
range	22-73	0,5-9	12-17	41-71	66-79
average	48	4	14	57	74
flowering plant					
	height (cm)	dry plant yield (grams)	yield to wet plant ratio (%)	yield to dry plant ratio (%)	percentage of water in wet plant (%)
range	24-102	4-32	17-21	50-84	66-75
average	57	16	19	67	71

Outdoor grown plants					
young plant					
	height (cm)	dry plant yield (grams)	yield to wet plant ratio (%)	yield to dry plant ratio (%)	percentage of water in wet plant (%)
range	270-320	60-206	10-13	29-38	59-74
average	297	132	11	33	65
flowering plant					
	height (cm)	dry plant yield (grams)	yield to wet plant ratio (%)	yield to dry plant ratio (%)	percentage of water in wet plant (%)
range	130-220	39-256	13-20	44-76	70-73
average	173	120	16	55	71

## REFERENCES

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